

# AVC

# AUDIO VISUAL COMMUNICATIONS

April 1990

## Multimedia Directions



**Video Camera Survey  
Recording Voice-Overs**





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# 1990 EDITORIAL CALENDAR

## JANUARY

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 INFOCOMM, Computer Graphics

Printer Survey  
 Slidemaking  
 Stock Libraries  
 INFOCOMM  
 Preview  
 Audio:  
 Digital Audio  
 Workstations

## FEBRUARY

**RECORDING FORMATS**

DVI  
 Desktop Editing Systems  
 LCD Projection  
 Audio: Recording Formats

## APRIL

**VIDEO PRODUCTION**

Developments in  
 Desktop Video  
 Pro Video Editing Systems  
 Video Camera Update  
 Understanding Multimedia  
 Audio: Sound  
 Effects Libraries

## MARCH

**PRODUCTION/POST-PRODUCTION HOUSES**

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 NCGA, NAB, Multi-Media Expo

Choosing the Right  
 Production House  
 Annual Production  
 House Guide

## MAY

**PRESENTATIONS**

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Staging  
 Training Executives to  
 Be on Camera  
 Remote Controllers  
 Leadership at the Lectern  
 Audio: Signal Processing

## JUNE

**DIGITAL UPDATE**

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 COMDEX, NAMM

Interactive Video  
 Video Digital Editing  
 DVI, Part II  
 NCGA and NAB:  
 Industry Trends  
 Audio: MIDI Basics

## JULY

**COMPUTER GRAPHICS**

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Film Recorders  
 Slide Production/Duplication  
 Computer Clip Art/Copyright  
 and Clip Art?

## AUGUST

**SHOESTRING BUDGETS**

*Show Bonus Distribution:*  
 SIGGRAPH

In-House Presentations  
 In-House Studio Overheads  
 Portable Projection  
 Storyboarding  
 Scriptwriting  
 Audio: Musical Phrases,  
 Talking with the Composer

## SEPTEMBER

**SLIDE SHOWCASE**

*Show Bonus Distribution:*  
 VIDEO EXPO

Copystands  
 Frame Grabbers/Genlock  
 Still Projection  
 Managing Your  
 Graphics Library  
 Audio: Pre vs. Post  
 Mixing for Video

## OCTOBER

**HARDWARE/**

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Annual Equipment

## NOVEMBER

**HARD COPY**

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 COMDEX

Color Copiers  
 Overhead Production  
 Still Video Printers  
 Laser Printers  
 Audio: Automated Mixdown

**AUDIO UPDATE**

Audio Workstations  
 Microphones  
 Needle Drop Libraries  
 Sound Reinforcement Systems  
 Audio Column: Industry Trends; DAT

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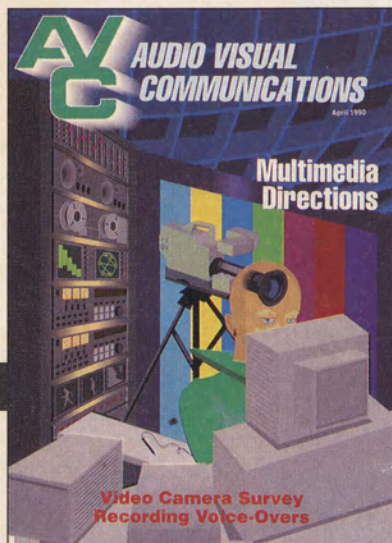
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### FEATURES

**A CODEC scheme that promises full-motion video and real-time editing on the desktop running on Microsoft Windows?** *Jim McGlaughlin*, Applications Development manager at Sequel Imaging, describes how you will be your own broadcaster in the not too distant future using UVC hardware.

30



Cover: Designed/created by Keith Folk depicting "imagination of a one-person desktop video suite, including graphics, animation and audio/video editing." These images were created on the Geni-graphics SG1 Console (20 hours) requiring four multiple exposures on a Geni-graphics 8770 Film Recorder. Geni-graphics, Suite 801, 414 N. Orleans St., Chicago, IL; (312) 321-1130.

**What's all this talk about desktop multimedia?**

Reporter *Chris Butler* hits the streets to hear what a couple of East Coast producers think of the preeminent buzz word of the '90s.

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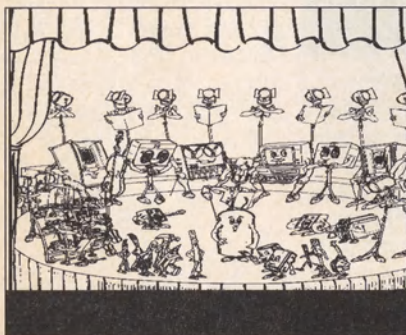
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**Jeffrey Berger, Chris Bunish,  
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Contributing Editors

**Camille Scuria**  
Editorial Assistant

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**Jacqueline M. Serra**  
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Executive Offices:  
**Charles Grecky**  
Director of Sales & Marketing  
**Judy Cecchini**  
East Coast Sales  
210 Crossways Park Drive  
Woodbury, NY 11797  
(516) 496-8000 FAX: (516) 496-8013

**Daniel Cascio**  
Midwest Sales  
Cascio Communications  
360 N. Michigan Ave.  
Chicago, IL 60601  
(312) 332-5945 FAX: (312) 332-6009

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315 Wall St., Suite 11  
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PTN Publishing Company is the world's largest publisher of professional photographic magazines, as well as leading publications in the imaging, security and public safety industries.

## LETTERS

**I**n the February issue of AVC, I read with great interest the article by Alex Siodmak on page 13 telling about Instant Video Booths. It stated Bruce Goldstein is the investor behind the idea, but it didn't give his address, only that he was based in Minneapolis, MN.

Please tell me how to contact Mr. Goldstein. I believe this is truly an "idea whose time has come."

—Paul Ray Smith  
PRS Productions Inc.

**For Paul and anyone else who would be interested in starting an Instant Video Booth franchise, contact Short Takes at 7390 Washington Ave. South, Eden Prairie, MN 55344; (612) 370-0303.**

**I** found your article on recording formats (Recording Formats, February AVC) very interesting. It was nice to hear someone else speak out for analog recording, rather than succumbing to the high tech flash of digital. Although I do support and encourage the use of digital, I find many people getting into the digital realm for the wrong reasons or not fully armed with the right information and clear expectations.

I would like to point out one weak spot in your article. In the first chart which dealt with cost comparisons of the different formats, you indicated the video formats are not editable. Did you mean you can't do cut/splice editing? If that is what you were talking about, I would like to point out the 2-inch audio is spliceable but tough due to its size. If any of the formats have a time code stripe, they cannot be spliced.

Thanks for restating the virtues of analog audio.

—J.L. Guenther  
Audio Engineer  
University of Wisconsin-Stout

**A**LL video formats are editable. If they weren't, I would be unemployed.

—S.S. Andrews  
Manager  
GRS Inc.

**My apologies for categorizing audio on videotape as uneditable. I hope I did not shock all those video editors who have been editing the audio tracks right along with the video for years. I should have explained that editing is quite customary on these video formats but requires the use of two machines (one source and one deck) as well as some sort of edit controller. In addition, the audio signal may be degraded by the loss of a generation, so the S/N ratio is important here.**

—Ken French  
AVC Contributing Editor



## WALKMAN ANNIVERSARY

Sony's 90-minute corporate birthday telecast marking the Walkman decade featured a fast paced, 60-second Quantel Paintbox/Harry open created by Electric Picture Works, New York City. The open was accompanied by a hyperspeed guitar track. The 10th anniversary Sony logo, a cartoon drawing of a globe wearing headphones, set the tone for graphics highlighting the show's headliners and images of people living the Walkman life style, such as a B&W video sequence of a subway rider with a hot colored "painted" headset, a girl pumping iron layered against a night cityscape and patterned backgrounds, and a woman floating serenely in a swimming pool. The woman was composited over a pool and the woman and pool over a "surrealistic, painted" TV. EPW took about 40 hours to produce the graphics. The various Hard Rock locations, where the cross-country parties ran, were linked by quick paced graphics of Cafe memorabilia, including its logo touched up in Paintbox. Simultaneously, footage of a silver Tiffany-made Walkman presented to music industry members who worked with Sony products contrasted with giant, grainy letters and neon signs spelling out S-O-N-Y. The live telecast uplinked from New York City's Hard Rock Cafe using Sony's Super Shooter Truck, loaded with Sony Professional products, and cut to the Cafes in Los Angeles, San Francisco, Chicago, Boston and Dallas. EPW design director, Nancy Paladino and Paintbox artist, Cathy Hundt, collaborated on the project with director/designer Robert Cohan for Broad Street Productions.

## INTERACTIVE VIDEO WALL

SGA Production Staging, Lansing, MI, now rents the Media Controller II for interactive control of video walls and other mediums. The "second generation" of video wall focuses on "viewer" application, according to SGA, so the video wall designer can develop a variety of applications. Touch screen is the key to "interactivity," which means the Media Controller expands the marketing concept of video walls to shopping malls, departments stores, hotels, museums, amusement parks and airports. By making your touch selection on a single kiosk screen, up to eight video disc players, tape decks or other devices with an RS-232 port will output the answers to your touch screen selections on the video wall; designed primarily to enhance the Delcom Videowall, the system can simultaneously run videodisc control, touch screen and video wall programming software and hardware. The system supports most manufacturers, such as Sony and Teac, prints out hard copy of menu item selection tools, creates and modifies touch screen menus via an internal paint system, and according to SGA will feature MIDI and SMPTE capabilities.

## INTERACTIVE MULTIMEDIA

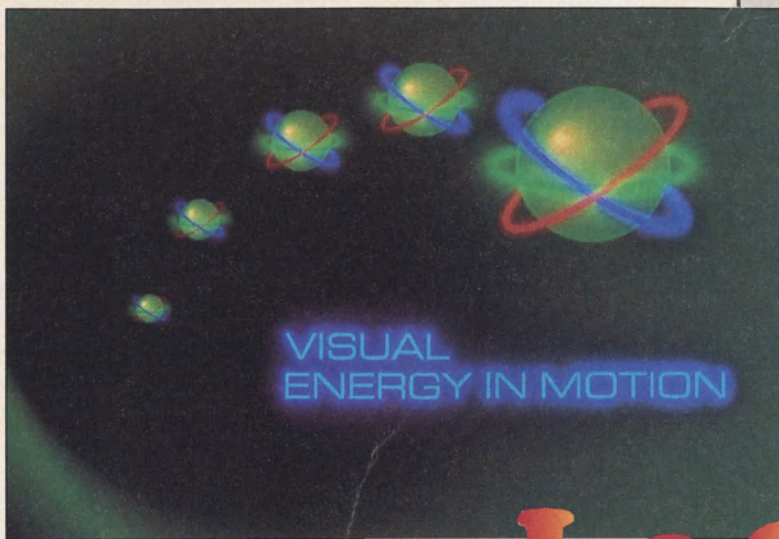
Interactive Media Technologies Inc. of Scottsdale, AZ, and Teleste Communication, in Turku, Finland, have jointly announced the signing of an agreement in principle, whereby IMT will grant to Teleste and its affiliates a non-exclusive worldwide license to manufacture, distribute and sell IMT's Multi-Link. Both companies will develop the MultiLink technology for use in multimedia learning systems worldwide and develop undisclosed application software in connection with the product. The Multi-Link system connects a computer with AV equipment, including a VCR, CD-ROM and laserdisc. The end result is a multimedia operating environment for the educational and corporate marketplace.

## DIGITAL SATELLITE CIRCUIT

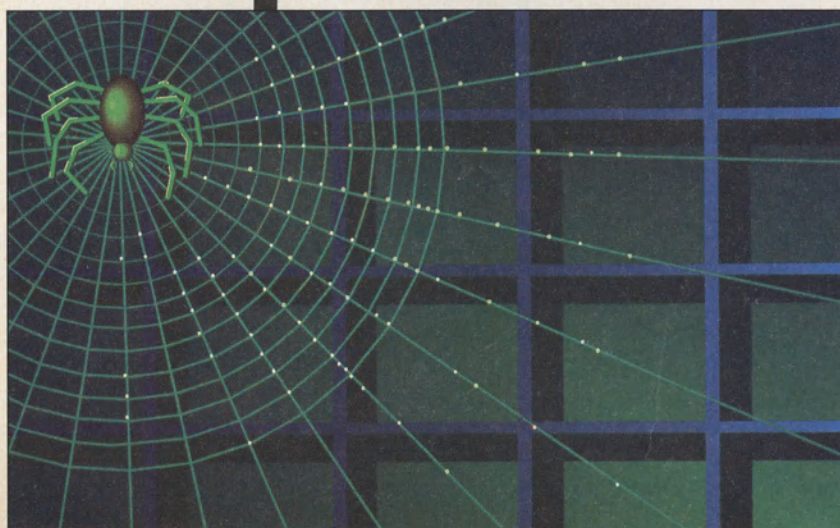
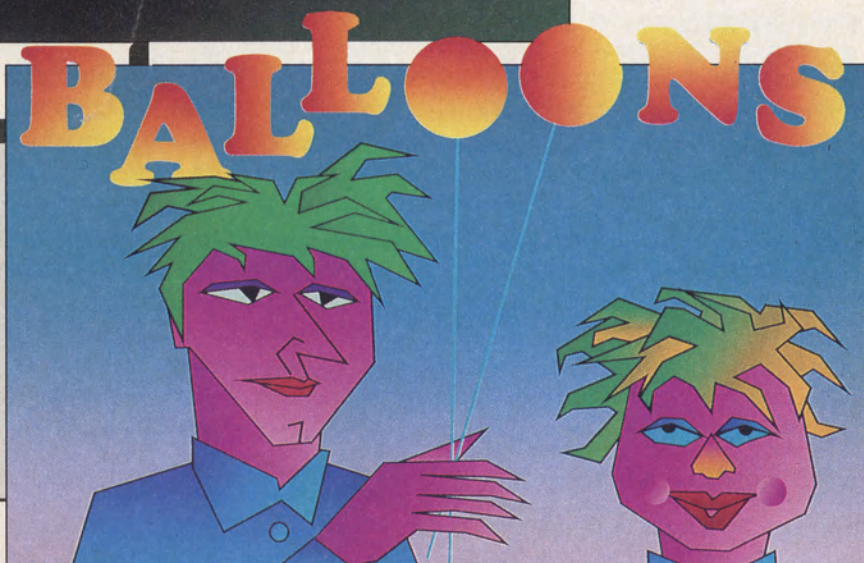
Chase Manhattan Bank has contracted with Overseas Telecommunications Inc. (OTI), Alexandria, VA, to provide digital private line service between the US and Chase offices in Mexico. This digital satellite circuit using a Very Small Aperture Terminal and Mexico's Ku-band MORELOS satellite marks the first such installation for an international bank between Mexico and the US. Chase Voice Network capacity has increased 50 percent with six new voice lines, one fax and data access to various computers in New York supporting electronic banking and electronic mail. Chase's New York headquarters will be linked to Mexico City from New York via OTI's domestic fiber network to its Gateway Earth Station in Dallas. The circuit will be completed via the MORELOS satellite and a VSAT located at Chase facilities in Mexico City. □

*If your company's business news falls into any of the categories on this page, send your news releases to the News Dept., AVC, 210 Crossways Park Drive, Woodbury, NY 11797.*

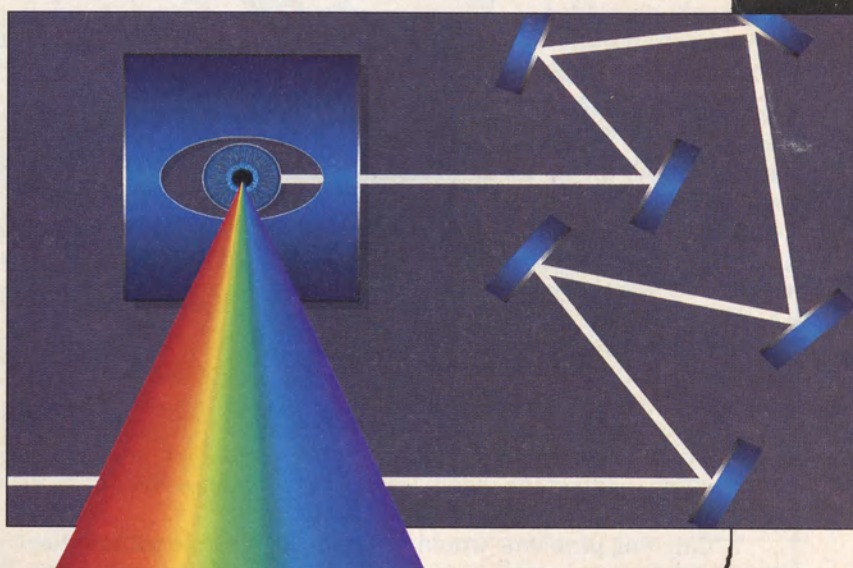
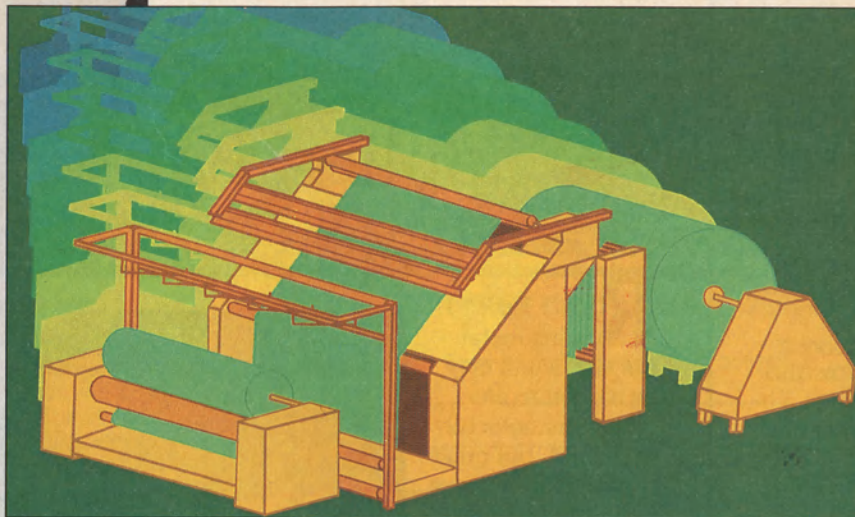




Hu Lindsay Inc. has provided "Visual energy in Motion" and "Renfield's Delight" which were created on a Genigraphics SG2 workstation and imaged on a Genigraphics PS-2000 film recorder. "Balloons" was made on a Pansophic Starburst workstation and imaged on a Matrix QCR-Z. Hu Lindsay Inc., 155 Post Rd E., Westport, CT 06880; (203) 226-3525.







ERA Computer Graphics has produced these slides using Pansophic's Artwork on an IBM PC AT, with an MVP board, and a Matrix film recorder. Engineering Reprographics Associates Inc., PO Box 888, Taylors, SC 29687; (800) IMAG-PRO.

Here's your chance to show off. "Slide Showcase" welcomes submissions of full-frame, non-glass mounted, horizontal 35mm transparencies (originals preferred), marked "front" and "top." We will choose images from each artist or organization. Please include design and production credits, as well as hardware and software used. A business address and daytime phone number must accompany all materials and a name must be on each slide mount.

Send your special effects graphics, photography and computer-generated material to "Slide Showcase," AV Communications, 210 Crossways Park Drive, Woodbury NY 11797. If you would like the slides returned, include a stamped, self-addressed envelope.





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## Video Spotlight

# User: ALCOA Supplier: Panasonic

BY RANDY HAYMAN

**R**olling metal through a mill may be old hat to aluminum manufacturer ALCOA, but quality control can never be taken for granted. And in keeping with that philosophy, ALCOA has recently bought new video equipment from Panasonic to monitor the various phases of its aluminum manufacturing.

Panasonic's AG-7300 S-VHS Player/Recorder, part of ALCOA's

portable video systems, helps pinpoint problems that occur when rolling metal through its mill. Bernie Hobi, ALCOA technologist, reviews individual frames with the jogger on the AG-7500A S-VHS editing unit. Images can be sent to any of several printers or stored on disc.

Frame by frame studies are made by grabbing images off the videotape and dumping them into a printer to be composited in a hard copy file. In addition, editing the video, leaving only the important data, saves time when the data must be looked at again.

"Catching problems would be nearly impossible without having tapes to review because aluminum sheets pass through the mill at speeds of between 1000 to 4000 feet per minute," Hobi said. High-resolution cameras set up above and below the sheets as they pass through the mill take the images.

Hobi said S-VHS quality withstands "extensive use," especially when making later generations.

Hobi's video lab, part of the ALCOA Technical Center in Upper Pearl Township, PA, provides plant support. It's stocked with two of Panasonic's AG-7500A S-VHS Editing VCRs and one AG-7300 S-VHS Recorder/Player, which is part of one of Hobi's two portable video systems. Hobi also uses Panasonic color monitors and cameras to view the images transmitted by the high-res cameras. "Generally, because we're dealing with aluminum sheeting, we use monochrome monitors," Hobi said. "But there are applications where color spectrum comes in, and we use color monitors." Hobi specs out his AV equipment needs based on the type of application, though ALCOA policy does not allow him to elaborate on those applications. Other ALCOA plants use the Panasonic AG-7300-based portable S-VHS video system as well. □



*ALCOA's Bernie Hobi monitors the phases of rolling aluminum using Panasonic video equipment.*

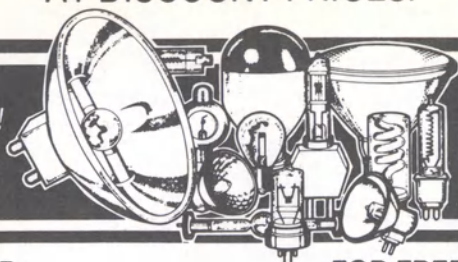
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# ESS

But what do we mean by video? Its official definitions are technical, associated with a signal named, in this country, NTSC. Is VGA video?

Arguably it is, perhaps as video is film. But the VGA from a computer will drive no NTSC monitor, unless the monitor is multiscan. If VGA is video, then video is defined not by technology, but by application. Video is the role it plays, of instant, scanned,

nic images, regardless of though its advocates may ter video."

a force around the time ermediate identity, en controlling media ystems and multi-image al computer video for overhead projectors, o project a malleable group observation and

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bolism. Look how far it has come in a decade, from NAVA's NAVA show to ICIA's INFOCOMM. The former echoes the slide/tape of its heritage; the latter anticipates digital. The population has changed accordingly from the gadgeteers who made things up to the marketers who make things move. It's to the latter we are indebted for bringing video to the forefront during the '80s. Now that it's here, we've no choice but to take it seriously.

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ing later generations.

Hobi's video lab, part of the ALCOA Technical Center in Upper Pearl Township, PA, provides plant support. It's stocked with two of Panasonic's AG-7500A S-VHS Editing VCRs and one AG-7300 S-VHS Recorder/Player, which is part of one of Hobi's two portable video systems. Hobi also uses Panasonic color monitors and cameras to view the images transmitted by the high-res cameras. "Generally, because we're dealing with aluminum sheeting, we use monochrome monitors," Hobi said. "But there are applications where color spectrum comes in, and we use color monitors." Hobi specs out his AV equipment needs based on the type of application, though ALCOA policy does not allow him to elaborate on those applications. Other ALCOA plants use the Panasonic AG-7300-based portable S-VHS video system as well.

**PANASONIC**

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# A VOICE FROM THE WILDERNESS

BY DON SUTHERLAND

**W**hat do you mean by video anyway? At the INFO-COMM show, known as the largest non-broadcast video show in the country, a media-hipster with his 8mm Handycam stood shooting the crowds. Two attendees, mindful of spoiling his shot, stopped just outside his frame. "That's okay," reassured the hipster, desiring their candid presence, "there's no film in this camera." "Oh," said the first passerby, relieved, continuing on her way. Her companion, a double-hipster, balked. "If there's no film in there," he said, "how come the little red light's on?"

Whether or not you think that's funny depends on what you mean by video. While mulling it over, consider this from INFOCOMM's excellent conference on HDTV. Referring to an HD videotape projected large screen, one presenter gushed, "It was beautiful! It was like an Ektachrome that came to life!" Ektachrome? What do you mean by Ektachrome?

In an industry in transition, vocabulary adopts definitions that suit the user. There's never film in a video camcorder, and whoever delivers an Ektachrome with 1125-line resolution should soon be looking for a job. But it doesn't matter what people say so long as everyone knows what they mean. Who expects dictionary definitions at a trade show?

## WHAT IS VIDEO?

This was the first big show of the '90s, ripe with symbolism. Look how far it has come in a decade, from NAVA's NAVA show to ICIA's INFOCOMM. The former echoes the slide/tape of its heritage; the latter anticipates digital. The population has changed accordingly from the gadgeteers who made things up to the marketers who make things move. It's to the latter we are indebted for bringing video to the forefront during the '80s. Now that it's here, we've no choice but to take it seriously.



But what do we mean by video? Its official definitions are technical, associated with a signal named, in this country, NTSC. Is VGA video?

Arguably it is, perhaps as video is film. But the VGA from a computer will drive no NTSC monitor, unless the monitor is multiscan. If VGA is video, then video is defined not by technology, but by application. Video is the role it plays, of instant, scanned,

potentially interactive electronic images, regardless of the source. Yes, VGA is video though its advocates may prefer the distinction, "computer video."

## LCD PROJECTORS

Computer video emerged as a force around the time the NAVA show adopted an intermediate identity, COMMTEX. Computers had been controlling media much earlier—video editing systems and multi-image dissolve programmers—but real computer video appeared with the LCD panels for overhead projectors, '87 or '86. They were the first to project a malleable computer graphics image for group observation and analysis.

Last year the LCD video projector made its INFO-COMM debut, as the LC-500 from Kodak and a prototype from Sharp. There are differences between LCD overhead data panels and LCD video projectors. Video implies full motion, requiring a quicker refresh rate of the LCs than the still-image panels do.

Kodak was enthusiastic about LCD a year ago, antici-

# AN INDUSTRY IN TRANSITION...

# INFOCOMM



pating market growth by the billions, hardly dissuading journalists from positioning their LC-500 as "the Brownie of video projection." The LC-500 did not return this year. Kodak has gone out of the LCD business. The division that produced the Datashow line has been acquired by its management operating as Sayett Technology. An industry in transition.

Sharp's projector returned, however, as a production model termed XV-100P. It projected an image comparable to that of a low-end CRT machine, with greater convenience and transportability.

Another even more compact LCD/video made its debut from Eiki, about the size and profile of a cannister vacuum cleaner. How clean the picture? LC video looks different from CRT display—crosshatched, from the LCs themselves—setting new criteria for judgement. If you're interested in LC video display, compare side by side at your dealer's.

#### THE SHOOT-OUT

What do you mean by video? At the projector shoot-out at INFO-COMM—successful in its debut last year and doubled this year in scope—projectors of all kinds were set side by side, receiving matched signals. Of those using CRT technology, "video" was the lowest quality. "Data" and "graphics" projectors were the ascending levels of superiority, generally costing more and projecting a more difficult picture. In fairness, some multisync projectors were entered in more than one group, but the fact remains those fed the full-motion NTSC video signal (15.75KHz,



Sony's Video Hi8 workstation.

## Is VGA video? Arguably it is, perhaps as video is film

640x200 pixels) enjoyed a less demanding life than those taking data (36KHz, 800x600) and graphics (64KHz, 1280x1024).

Again these are called data and graphics projectors respectively, not video projectors. Are these semantics more important than whether or not there's film in a camcorder?

The shoot-out was improved by three more subsets of equipment. LC panels (31.5KHz, 640x480 pixels) for overhead projectors formed their own graphics group, while self-contained rear-screen projectors were players in data and graphics categories.

At the outskirts of the exhibit, separated to avoid invidious comparisons, two lightvalve projectors

slugged it out with video and data signals. Is anyone surprised video from the lightvalve machines (31.5KHz, 1280x1024 pixels) was superior to the others? The less expensive of these, a Talaria, is priced just under \$200,000, so it ought to be good. The surprise was how much better its performance seemed than its rival's, priced at nearly twice as much. Does that make it the better machine? Projectors like these, complex devices that they are, may embrace trade-offs less apparent.

Case in point: Despite all the care in setting up the shoot-out, the electrical demands of 50-plus projectors and the proximity of wiring caused cable noise to derange some of the projectors. Some displayed faint black bars rolling up the screen. Some, but not all. A couple had characteristics, attributed to their power supplies, less vulnerable to line noise. This was not an intended demo of the shoot-out, but it did bring home sage advice: If your facility is located where the electricity comes in dirty, you may prefer a projector for its power supply over an issue like, say, resolution.

But please do not run out for a low-res video projector; resolution and power stability are not trade-offs. The point is a decision for projectors is as complex as you'd expect in a field whose prices begin at three grand. A long look is recommended, and you'll find no opportunity better than the INFO-COMM Shoot-Out (to be staged again next year). If you can't wait, try your hand with a few logical contenders from your dealer's stock.

We can highlight some of the new projectors announced at the show. Macro Data presented its model 36, a portable monochrome (green) data projector whose multiscan acceptance is 15 to 36KHz. The Arizona-based distributor positions the instrument as an alternative to LCD overhead panels when higher resolution and contrast is required.

General Electric showed Imager 150 and 410 projector models, both rated at 600 lumens. Model 410 accepts inputs from 15 to 55KHz. Both can be operated by remote



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control for adjustments when not reachable (such as ceiling mounted units).

Ampro presented its VideoBeam Graphics and Retrographics projectors, both similar but the latter self-contained for rear-projection. Both specify 500 lumens output, scanning 14 to 72KHz, for \$14,900 and \$19,900 respectively.

Sony showed three new Multi-scan projectors VPH-1270Q, VPH-1031Q and VPH-1042Q, accepting a wide variety of inputs including most computer graphics, S-Video, TTL, PAL and SECAM.

What do you mean by video? A broadcaster gives a different definition from an industrial producer, but nowadays we're told a third customer is most significant of all. This is the business presenter. Presenter? Don't forget our industry is in transition. The major vendors developed a market called "Presentation" and having sired it, declare it real, adapting themselves to it.

In a release circulated at INFO-COMM, Kodak's Robert S. Wollman, manager, Presentation Technology for Kodak's Professional Photography Division said: "We used to think of presentation technology as a skill for specialists. During the



*Sharp QA-75 panel*

'90s, we need to simplify the process so more people...can be more effective. In a sense, we need to re-emphasize the audiovisual presentation techniques which have worked so well for us...and make them available to more people."

Sony illustrated how this is done by announcing a restructure of Sony Professional Video Div. into "Production Applications" and "Business Applications."

The big video/graphics projectors could suit both categories, screening the corporate movie and later supporting presentation of text from RAM in a small conference. But what if a second presenter needs to book the room? On that eventuality—or inevitability,

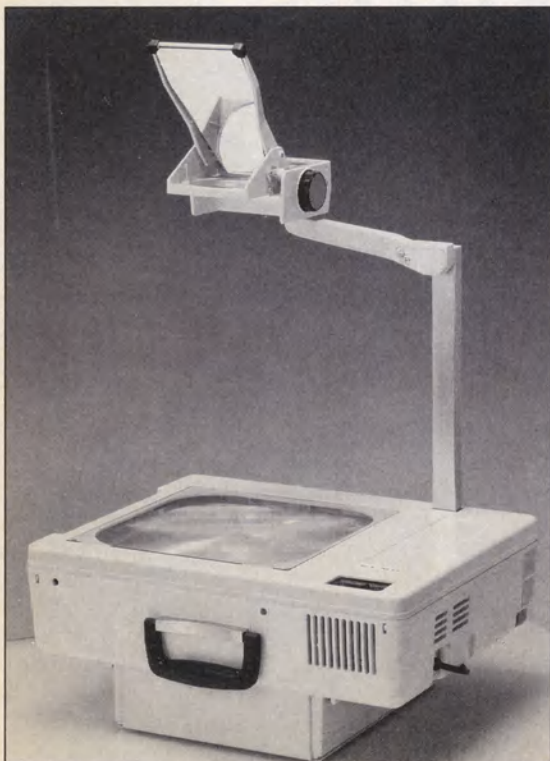
as this brave new world assures us—lots of new products made their debut at INFOCOMM with less firepower and more simplicity for the non-technical user.

#### OVERHEADS

Among overhead projectors, we saw the new Elmo HP-254S, portable at 18 pounds, moderately priced. Buhl's Model 500XT and 500XTC overheads feature a sloped platen, said to be ideally suited to LCD panels; XTC model has two lamps and changer, the instruments cost \$495 and \$549 respectively.

As everyone knows, overhead projectors are not the latest-tech (having been on the market in 1889) and should not illuminate our running question, "What do you mean by video?" But

maybe they do, better than we think. To some it was ironic that overheads with standard transparencies were used in such environments as Sony's own press conference and in the HDTV conference itself. The irony lasts as long as we consider alternative technologies antagonistic, which upstarts sometimes seem to do. But if the high-definition boys think a completely manual, optical device suits their state of the art, so do I.



*Elmo Mfg. HP-254S*

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## COMBINING TECHNOLOGIES

That said, we can also acknowledge that the overhead projector becomes a video projector of sorts, with the addition of LCD panels sourcing computer graphic RAM. The interactivity of these systems may prove as significant as the vendors say, for updating alternative statistical scenarios. Since photographs can be scanned into RAM, they are also fodder for these systems though present resolution of LCD recommends their treatment as impressionistic.

Among the new LCD pads at INFOCOMM, we saw nView's ViewFrame RGB "electronic transparency" with resolution of 640x480 pixels, at \$3995. Sharp announced its QA-75 gray-scale model, with its 17:1 contrast ratio, at \$1795.

One thing the LCD panel cannot do that the optical overheads can is depict live movement of 3D objects. What would we mean by video if it couldn't do that too? It supports the original and literal definition of "television." Two new products at INFOCOMM assured "distant seeing" would be preserved in the Age of Presentation.

## VERSATILITY OF VIDEO

This is a versatile commodity this video, versatile enough that a range of "accessories" (if we may call every non-"video camera/recorder/editing" unit that interacts with video somehow an accessory) finds plenty of occupation, including Mitsubishi's CP-200U video copy processor for 6x8-inch thermal sublimation dye transfer prints, sourced from outputs 15 to 35KHz.

American Video's Projector Protector automatically turns a projector off three hours after the last image was shown. And the Bretford monitor stand holds TVs any size up to a 35-inch screen. In addition, Macro Data's Twinscan doubles NTSC frequency to 31.5KHz for 60

fps display for \$2495.

For those who have sending and receiving devices that cannot send/receive to each other, Covid announced interfaces for projectors/monitors to computers and S-VHS for \$595 and \$328 respectively, as well as "Interface Expert" based in a Casio SF Boss to display interface considerations of over 800 computers, plus other informational programs, for \$295. nView showed its computer remote keyboard, Toteboard, that sends keyboard commands to IBMs and com-

*At the projector shoot-out, projectors fed the full-motion NTSC video signal enjoyed a less demanding life than those taking data and graphics*

patibles by IR from distances up to 30 feet. This could interest programmers of multi-image slide shows who like tweaking on-site from the screen.

But multi-image slides are not what you mean by video, are they? Or are they? In an industry in transition, where double-hipsters argue the red light on your camcorder proves you have film in it, someone may also argue he knows what that big dissolve show was called. You know, a video.

People leave home for trade shows not to renew acquaintance with whatever they left behind but to gawk over the improvements. This makes them interested in sciences that needed work to begin with, which describes video.

In a trade show whose large dealer constituency is on the lookout for stuff to yell about, you don't churn a hoopla by gilding the lily. ClearLight's gilded lily takes the form of a SMPTE Converter for time code formats (color and

mono) to ClearLight and AVL clock format.

This is a Rosetta Stone among multi-image programming, video and music systems, a foundation of unilateral sync. Big multimedia extravaganzas could become the more amenable with everything marching to SMPTE, but the news at INFOCOMM came from the sphere of simplicity too.

## BACK TO BASICS

Kodak announced a new two-projector real-time programmer with



two fade speeds. Is this in case 1978 ever comes again? Maybe 1978 never wore off any more than 1889 did with its overhead projector, and maybe companies forever will need a two-projector dissolver in the product lines—or at least a slide dissolve system of some kind, such as HP Marketing's Rolleivision 35 Twin Digital P Slide Projector, a dual lens/lamp projector feeding from a single non-rotary (European) tray, programming the slide show in its own proprietary RAM.

So what do you mean by video, anyway? Whatever video is, it's clearly a medium diversely deployed. For all we can say, every step taken by conventional video becomes one more footprint for a digital industry to follow. But this introduces speculation, something people never do, never never, in an industry in transition. □

*Don Sutherland, imaging consultant, is also a producer, cameraman and programmer using 35/16mm.*



**Panasonic  
Has Video Production  
Down To A System.**



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# ENG/EFP STUDIO



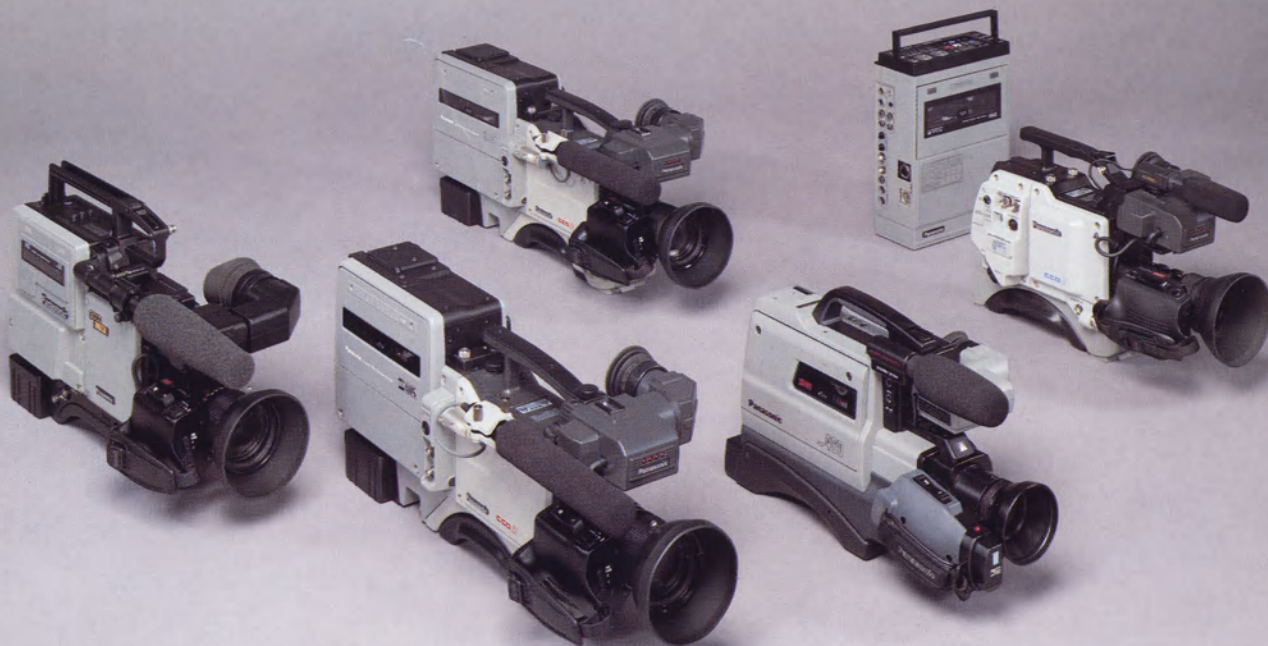




# EDITING PLAYBACK







## Take It On The Road

**P**anasonic lets you hit the ground running with compact SVHS and MII camcorders. They give you less to carry on your shoulder and your budget by combining component recording technology with the efficiency and flexibility of half inch cassettes.

No matter what your specific application requirements may be, Panasonic has the right camcorder for you, including both dockable and fully integrated one-piece units. In addition, only Panasonic has SVHS camcorders available with three, two and single CCD image sensors and up to 700 lines of resolution. Panasonic lets you decide what's best for you.

Panasonic SVHS and MII camcorders don't cut any corners when it comes to recording in the field. With high performance features like on-board vertical interval and longitudinal time code, hi-fi audio, and a variety of auto adjustment functions. They're features that Panasonic brings to the field so you have less work when you're back in the studio.

# ENG/EFP

# STUDIO

## Panasonic Has V Down To A

Selecting the most comprehensive video production system has never been easier. The Panasonic® Professional Video Production System is designed for total systems operation in the field, studio, editing suite and for virtually any playback application.

The SVHS recording format is at the heart of Panasonic's comprehensive video production system. It provides a new level of high performance and cost effectiveness across the spectrum of video recording and playback applications. One look at the numbers tells it all. Five generations of signal integrity, 400 lines of resolution and two-hour operation on a single cassette.

You can complement the performance of SVHS with the sophistication of Panasonic's MII. The MII format delivers the operational characteristics





## Raise The Editing Standard

**P**anasonic is setting new standards in editing excellence. With SVHS and MII VCRs and editing components that maintain the integrity of your original footage through multiple generations of recording. And a host of sophisticated features designed for any application.

Panasonic has the editing system

configuration you need. From sophisticated programmable 128 event A/B roll systems with time base correction to highly accurate insert and assembly systems. It's everything you need to turn ordinary footage into extraordinary productions.

In addition, Panasonic speaks the industry's language for inter-format editing with RS-422 VCR control interface components. And video signal transcoders that allow you to integrate virtually any video signal with the Panasonic Video Production System.

Whether your editing operation requires single format or inter-format editing, Panasonic delivers the high performance and signal integrity you demand for final playback.

## Video Production A System.

you need for demanding broadcast and post-production applications. Like a luminance bandwidth of 4.5MHz, a K factor of 2% and a signal-to-noise ratio in excess of 50dB. To produce images that equal one inch VTRs with signal integrity that exceeds five generations of recording.

The integration of SVHS and MII video production components adds a new dimension to video system specialization. Because you can

# EDITING

# PLAYBACK





# ENG/EFP STUDIO

Panasonic® Professional Video Production System is designed for total systems operation in the field, studio, editing suite and for virtually any playback application.

The SVHS recording format is at the heart of Panasonic's comprehensive video production system. It provides a new level of high performance and cost effectiveness across the spectrum of video recording and playback applications. One look at the numbers tells it all. Five generations of signal integrity, 400 lines of resolution and two-hour operation on a single cassette.

You can complement the performance of SVHS with the sophistication of Panasonic's MII. The MII format delivers the operational characteristics

## Improve The Studio Scene

**P**anasonic makes studio productions productive. With high performance studio components that provide efficiency through versatile applications.

Whether you are planning a studio with a multiple camera system, a single camera, or looking to expand an existing facility, Panasonic CCD cameras will capture every detail. With features that include up to 700 lines of resolution, gen-lock capability and remote control operation. They provide the results you need today with an eye on expansion tomorrow.

Panasonic's exclusive three and two CCD cameras let you specify the

configuration and features that meet your requirements best. And as an added benefit, Panasonic CCD cameras operate as well in the field as they do in the studio.

Panasonic's three CCD cameras also feature component outputs to take full advantage of SVHS and MII studio recorders. And to see that all the action you've recorded looks its absolute best, Panasonic monitors give you more than just a pretty picture. They allow you to easily analyze any video signal from any video source in your studio. A safeguard you'll appreciate during postproduction and final playback.





bandwidth of 4.5MHz, a K factor of 2% and a signal-to-noise ratio in excess of 50dB. To produce images that equal one inch VTRs with signal integrity that exceeds five generations of recording.

The integration of SVHS and MII video production components adds a new dimension to video system specialization. Because you can select the Panasonic components you need for the highest degree of performance and flexibility for specific system applications. And for highly efficient playback operation, there's Panasonic's line of professional VHS recorders and players.

Anyway you add it up, the cost/performance characteristics of the Panasonic Video Production System are revolutionary.

# EDITING

# PLAYBACK

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**P**reserve the quality of your finished production through distribution and playback. With professional playback components from Panasonic. They offer you the performance and versatility required to satisfy even the most demanding applications.

Panasonic VCRs and TBCs are perfect for closed circuit, cable and even broadcast transmission. They're ideally suited for stand-alone operation and can easily be configured for station automation.

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combination of SVHS and VHS VCRs, monitors, and video projection components to suit virtually any size audience.

If your playback application involves program distribution to a corporate network, Panasonic will carry your message. With VCR features like video sensor recording that allows you to record programming transmitted during off-peak hours. So you can save on transmission and personnel cost. And for large scale duplication and point of sale playback, Panasonic professional VHS VCRs are the industry's standard for excellence.





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Panasonic offers the most comprehensive video production system available for every stage of the video production process. With all the performance, compatibility and versatility required to compete in the video market. And the outstanding cost/performance qualities necessary for today's economic environment.

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# **Panasonic**



BY ALAN C. ROSS

If you're having a videotape produced, with a little preplanning, you can cut its cost by a factor of two or three. By finding additional uses for the production, the price per tape can be drastically reduced and your payback increased by a like amount. This extra effort is called getting the maximum return on your investment.

Justifying the budget for a marketing or training videotape is much easier if you can show several different uses for the video or if you can split the cost with another department in your company. Different variations can be produced for relatively little additional costs if they are planned in advance. You may find one of the alternate variations of the video ends up providing an even better return than the version originally planned.

For example, a client that manufactures a construction product asked us to produce a training video to show contractors how to install the product. Their immediate problem was contractors resist switching to any product that would require learning new installation procedures. So the company will be enclosing an offer for the video packaged with the prod-

ocur, the alternative scenes can be re-edited into your original tape without having to pay for reshooting. For example, one of our clients was thinking of changing the warranty on their product. We shot each of the alternatives and had them available if they should decide to make a change. The existing show is constructed so

that the alternative scenes could be edited in with a minimum of cost.

## APPROACH OTHER DEPARTMENTS

As you go through "Alternative Uses" listed below, think about each department in your company. One or more departments can use a variation of your planned video. You may



# MULTIPLE USES

# CUT VIDEO COSTS

uct. The tape will be sent to the customers, free of charge, when they call a toll-free number.

As a second phase, we proposed they conduct direct mailings offering the video to all U.S. contractors. While it might have been preferable to distribute a tape to new contractors showing the product's features and benefits, this would have entailed producing an entirely different tape. In fact, several contractors indicated they would get much more use out of a training tape than they would a marketing presentation. The videotape would be offered to the contractor for the cost of handling and postage. This charge would be refunded to the contractors when they sent in proof they had bought the product. We also proposed they revise their existing print ads to include a coupon requesting a videotape.

## SHOOT ALTERNATE SCENES

If there is the likelihood any of the information covered in the video may change after it's been produced, shoot it both ways. For very little additional cost, you can shoot alternative scenes. Then if the change does

persuade them to share the budget for the project. A slightly different version of the script could be written for the second use so that you don't have to make compromises in your message to accommodate the second version.

## VARIOUS LANGUAGE VERSIONS

Are you considering making a sales push in Japan? Do you have Spanish speaking employees or customers? A foreign language version can greatly increase your audience with relatively little increase in cost.

Early in your planning, consider whether the approach you'll use in the script will work culturally in the foreign language version. Is the tone and humor appropriate for the foreign speaking audience? Can the script be translated literally or does it need to be recast?

The shooting script may also need to be modified slightly to give more time for saying foreign phrases. Your producer may also need to check out the TV tape formats used in foreign countries.



## ALTERNATIVE USES CHECK LIST

The following list of typical alternative uses may at first seem rather obvious. But we have found clients overlook profitable, potential video applications if they don't systematically examine all of their options. Don't forget to consider the availability of videotape players when thinking of alternative uses and whether you'll have to provide additional equipment. You may find for example dealers already have equipment in place because a competitor regularly distributes product information videos to them.

### 1. Sales Demo

A salesperson who presents a high-quality videotape to a client is making a statement about the sophistication and prestige of the company. A videotape can ensure your salesforce is presenting a consistent, unified message. Details of the product or its uses can be demonstrated. A sales video won't replace a salesperson, but it can

substantially improve his or her impact. Typical applications are:

- A. With customers in stores or dealerships.
- B. At the customer's facility.
- C. In the customer's home.
- D. To sell to dealers, reps, distributors or brokers.
- E. Presentations to associations and governmental groups.

### 2. Sales Training

Sending videotapes to outlying sales offices can cut the cost of travel and provide more timely information. Postage for mailing a videotape is 90 cents versus the thousands of dollars it costs to travel to outlying offices or to bring the salesforce into the company headquarters. A videotape record of sales conferences can be sent to personnel who cannot attend the meetings. Training videos can be sent to:

- A. Company salesforce.
- B. Reps, distributors, brokers and their salesforce.
- C. Retailer's salesforce.

### 3. Sales Conferences, Conventions and Trade Shows

If you are planning on a separate version of a video for a convention or trade show, you will want it to be very visual and not overly dependent upon the sound track to get the message across. The visuals need to stop foot traffic at your booth. The trade show atmosphere is not conducive to listening to an involved narration or explanation. Consider using video for:

- A. Meetings.
- B. Trade show booths.
- C. Trade show video networks.
- D. Hotel video networks.
- E. Teleconferences.

### 4. Point Of Purchase

Product demonstration videos could be incorporated in interactive Point Of Purchase kiosks or shown continuously on in-store players.

### 5. Recruiting New Dealers

If you are producing a marketing video for customers, you could shoot a separate introduction to be addressed specifically to dealers.

### 6. Advertising Premium

You might revise an existing print ad to include a coupon offering the videotape free of charge or for the cost of postage and handling.

### 7. Customer Direct Mail

Look at direct mailing of videotapes to highly qualified prospects. This may be a way to get your message through to buyers who are otherwise hard to reach. A videotape is a unique vehicle that's hard to ignore. It is not as likely to be overlooked as is a print piece.

One of our clients, Cal-Shake, a maker of fire-proof roofing, is mailing 5000 copies of "Re-Roofing With Confidence," a video we produced to qualified home owners in the Western States and Hawaii. We also prepared a Contractor Version that includes the "Re-Roofing..." tape and a second how-to application show we did for them previously.

### 8. Customer Instruction Manual

Manufacturers spend significant resources on instruction manuals, but customers often don't take the time to read them. Video instruction manuals can increase customer satisfaction and may reduce the cost of customer service. Some possible areas to cover are:

- A. How to set up and operate the product.
- B. How to get the most out of the product.
- C. Additional uses for the product.
- D. Add on or additional products they can buy.
- E. Reinforce the customer's good judgement in having bought the product.

A variety of methods can be used to *distribute* such tapes. They can be:

- Packaged with the product.
- Sent out on request.
- Available for purchase in the stores handling your product.
- Included as a part of the sales contract.

One manufacturer of microwave ovens included a video on gourmet microwave cooking.

### 9. Sponsored Film

If your video would have wide public appeal and is not too com-

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mercial, you might have it distributed through Modern Talking Picture Service's Free-Loan Films & Videocassettes. If your show addresses an issue, such as safety, which is of wide concern, you might consider a generic version to be sold or loaned directly to other companies.

#### **10. Investor/Financial Community Relations**

A highly visual, exciting video presentation may be the perfect compliment to publications directed at stockholders, the financial community or potential investors.

#### **11. Corporate Communications**

Video newsletters and video magazines could inform employees of vital corporate information and changes. Showing your marketing videos to employees in other departments can help to keep them informed and involved.

#### **12. Legal**

Videotapes can illustrate the company position in complex litigation. A slightly different version of the tape might be included with the product to show its proper, safe operation.

#### **13. Administration**

Video can explain how to best use corporate services such as new telephone systems or in-house printing.

#### **14. Recruiting**

A PR video about the company and its products could be shown to potential recruits, made available to colleges and universities, and used to orient new employees.

#### **15. Benefits**

A review of the health and welfare benefits could show employees how to take full advantage of its services. A different version of this tape could be used for recruiting.

#### **16. Training**

Training videos for employees might be modified to provide training for customer's personnel.

*We have found clients overlook profitable, potential video applications if they don't systematically examine all of their options*

#### **17. Safety/Security**

Safety videos could be created from employee or customer training videotapes on the proper use or maintenance of the companies products. The same tapes might also be used as evidence in product litigation actions. Preparedness tapes are also used to instruct employees on proper handling of fires, earthquakes or explosions, even terrorist threats.

#### **18. Public Relations**

Marketing videos that are informative and not too "hard sell" may be proper to show community groups. Portions of sales demo videos on new product tapes might be included in video press releases. Other alternatives include:

- A. Professional meetings and satellite distribution.
- B. Public events and fairs.
- C. Facilities and plant tours, orientations and open houses.

#### **THE FIRST STEP**

When you are first considering a video production, conduct a brainstorming session to come up with every possible alternative use for your program. Go through the above check list. It should only be your starting point. As a result of the widespread use of consumer videotape players in the home and the office, corporate video is growing rapidly. New applications are constantly being developed. You should be able to come up with several alternatives. □

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*Alan C. Ross has specialized in A/V communications in marketing, sales and training for industry and government for 20 years.*



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# Will MacroMind's Marc Canter

## Become Mr. Multimedia?

BY DONA Z. MEILACH

**T**omorrow's historians may dub Marc Canter, the 32-year old founder and chairman of MacroMind Inc. based in San Francisco, a Multimedia Man instead of a Renaissance Man. Possibly they'll call him both. Canter's MacroMind line of multimedia software reflects his multifaceted talents and experiences. He's convinced, and convincing, that multimedia is a revolution, a new art form that will change the basic way we use computers to communicate ideas.

Lest you debunk his forecast, he refers to other developments that were met unenthusiastically five years ago. "Examples are the mouse and bitmapped displays," he said. "They're now mainstream standards. Even the Apple Macintosh overcame initial market resistance. Today the Mac is, and will continue to be, THE machine for multimedia. I believe that five years from now, video, audio, and high-resolution graphics will be standard parts of every computer."

Why?

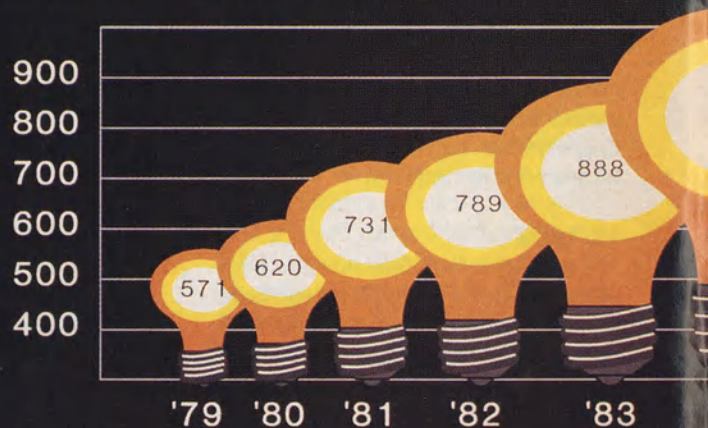
Canter explained: "Multimedia means text, graphics, animation, audio and video. MacroMind software combined with the Mac gives you those capabilities. When you have this graphics-based machine and the software, you don't have to buy a synthesizer or a graphics card. Other systems nickel and dime you to death to get Mac-like capabilities...except they're not nickels and dimes."

Canter's enthusiasm is hard to reign: "Graphics-based computers are the right solution for the future. It's hard to believe that the Macintosh has only a 15-per-

**Electricity from nuclear energy: worldwide growth**

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Created Using 35mm Express

*Presentation software shines in its ability to generate charts and enhance them with images. Example from 35mm Express  
Courtesy/Business & Professional Software*

cent penetration in corporations. Companies buy millions of dollars worth of text-based computers each month. I think they're crazy! By 1995 75 million text-based machines in the world will be outmoded. Right now there are visionary people making machines that will handle multimedia even better than the present Macs do. You may see them within 18 months! What's going to happen to all the text-based systems?"

He grinned prophetically, "A lot of used computers will show up in third-world countries in a few years."

### HOW MULTIMEDIA IS CHANGING THE WAY WE COMMUNICATE

"People already use several elements of multimedia. Now we have to teach them how to put it all together. Once they do, they discover that movement is dynamic; it gets attention; it sells products; it speeds up learning processes. People who have been using slides for



years now want to stand out in the crowd. Multimedia does that and drives the presenter's message home faster and more persuasively. We give them added value for their time and effort.

"There are four areas where multimedia is proving valuable. Presentations and learning top the list. Then there is desktop video which is proving to be a dynamic marketing tool. Visualization is used extensively by scientists and research people to simulate how a procedure may work. For prototyping and explaining complex concepts, it can't be beat.

"That's the essence of the market. We provide the tools. Our problem is convincing people that multimedia is one more capability of current machines. It can be accomplished on the same computer they use for desktop publishing, engineering, advertising art, or color prepress.

Canter breaks users into a three-level triangular chart. The individuals grouped in the smallest top level are those who are using big workstations with high-end products such as Quantel Paintbox, Lumina and Targa. Those in the broadest bottom level work with PageMaker, Ventura, MacDraw, Microsoft Word and WordPerfect. They're not willing to create art; they just want to use prefabricated images such as clip art.

The middle level people use PowerPoint, Aldus Persuasion, HyperCard and Corel Draw. They're tackling the products with a missionary zeal; they're always looking for something new. MacroMind is aimed at those in the middle band. "The top-band people have big studios and high-cost equipment; we provide a low-cost alternative. MacroMind gives them the oomph of video without requiring studio expenses," Canter said.

#### CANTER'S BACKGROUND

Canter's eclectic training put him on the track that led him to multimedia. His smooth, melodious speaking voice is a residual of his early piano and singing training. His similes sparkle with musical lore. He sang in a children's choir. At Chicago's Hyde Park High, a school known for its avant-garde training in the days when Marc was there, he "freaked out" assembling sounds on a tape. His voice teacher taught him varied types of music: Gregorian chants, madrigals, Beethoven. He bought a synthesizer and worked with that. In college, he bought a microprocessor kit and built a computer.



Marc Canter

From the beginning he thought of a computer, not as an end in itself, but as a tool for working with music. At the Art Institute of Chicago, he discovered the computer was also a tool for making art and designing graphics.

During an early job in New York City, Canter was involved with interactive videodisc, videotext and laser light shows. It was there he saw artists struggling to use the computer to control their art. He directed his energies toward helping them.

gling to use the computer to control their art. He directed his energies toward helping them.

"This is prehistoric stuff now, compared to MIDI. Then I was finding tools an end user could never use. My goal was to assemble a system an artist could use without being a programmer. From 1980 to 1984, I was using S100-based systems with 8-inch floppies and a hard drive in another cabinet. It was complex stuff. When the Macintosh came out I flipped; it was easy, clean." Canter worked for five companies during those early years. "Each company had brilliant, amazing technical people. The artists, the programmers were incredibly creative and innovative. The managers, who couldn't fathom what these people were doing, didn't know how to make decisions based on their employees' technical expertise. Invariably they made poor decisions."

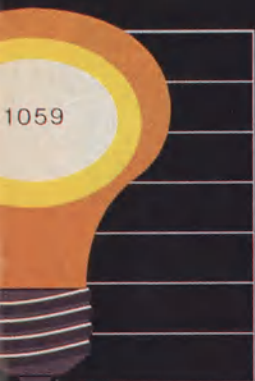
In the eight years Canter worked for others, he saw companies financial standings change drastically. He read prodigiously about how companies make decisions. He decided to surround himself with the most powerful people he could; writers, analysts, financial and technical people. He formed a set of ideas. He had confidence in his perceptions of the industry.

Today's MacroMind products are an outgrowth of Canter's early involvement with writing successful video games. In 1984 the video game industry floundered and the Mac appeared. "For about 5 years I stayed alive by selling my programming tools for \$100 for others to create video games for the Mac. A lot of people began doing things with it I never would have thought of. In retrospect, I should have sold those tools for much more. Mac game programmers had a feeding frenzy with my software."

Canter had cofounded MacroMind in 1984 with a group of artist and musician friends. Their goal was to mix art and technology. "A guy from DuPont showed me how he was using my software to animate molecules as they combined to create a synthetic fiber...that was artistic visualization in a direction I hadn't considered. So I redirected my efforts; the business market represented more potential than the art market." □

*Dona Z. Meilach specializes in computer presentation developments. She is author of "Dynamics of Presentation Graphics" (Dow Jones Irwin) and a frequent speaker at business and graphics conferences.*

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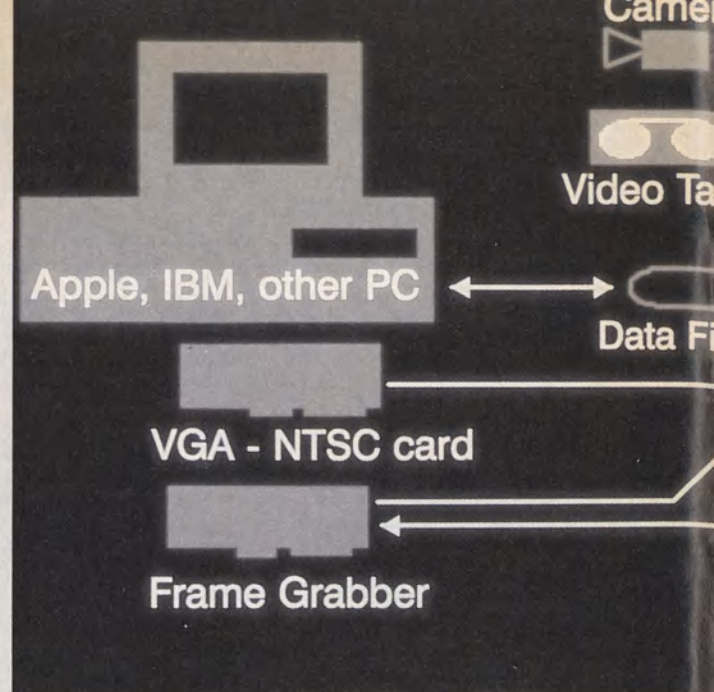


BY JIM MCGLAUGHLIN

**A**s a developer and former Truevision dealer, I have been waiting for technology to make it possible to create presentations and videos right on my PC, without having to use videotape editing decks and controllers. A year ago this article would have been titled "Desktop Video." The term "desktop video" describes a market that hasn't quite made it due to lack of inexpensive technology. By desktop video I mean the capability to record video digitally on a PC's hard disc, cut and paste video segments like a word processor cuts and pastes text and then output the result as finished video—all without the use of videotape.

*Be  
Your  
Own*

# Broadcast



## UVC

Universal Video Corp. (UVC) is a startup that developed a technology for compressing and decompressing video and synchronized audio on a hard disc in real time. The company has developed applications for video telephones, video teleconferencing using dial-up lines and sending video over Ethernet LANs.

UVC is not on anyone else's list of multimedia technology because

by itself it only does one thing: solve the CODEC problem. But it does it well. Image resolution is up to 720x486 at 30 fps. Images are stored on a hard disc in DOS accessible files. In real time, images may be decompressed to NTSC video, RGB analog or VGA display format. Software-only decompression for VGA systems without UVC hardware is possible at over 15 frames per second.

Motion files contain linked but

separate video and audio. This capability makes remixing audio and changing the sequence of video easy. UVC's file structure also supports a separate data area, making it possible to have database information separately linked into every frame.

## UVC IN A MULTIMEDIA ENVIRONMENT

A desktop presentation application Sequel Imaging calls Pro-Presenter consists of a high-resolution graphics card similar to Truevision's VISTA or Matrox's Illuminator. Full-motion video is played inside a window of a 1024x768 still image or background. Authoring software provides for interaction with a mouse or touch-screen monitor. One 700MB ESDI hard disc provides enough storage for 20 minutes of full-frame video and audio at 30 fps. Off-line storage is accomplished by 4mm DAT.

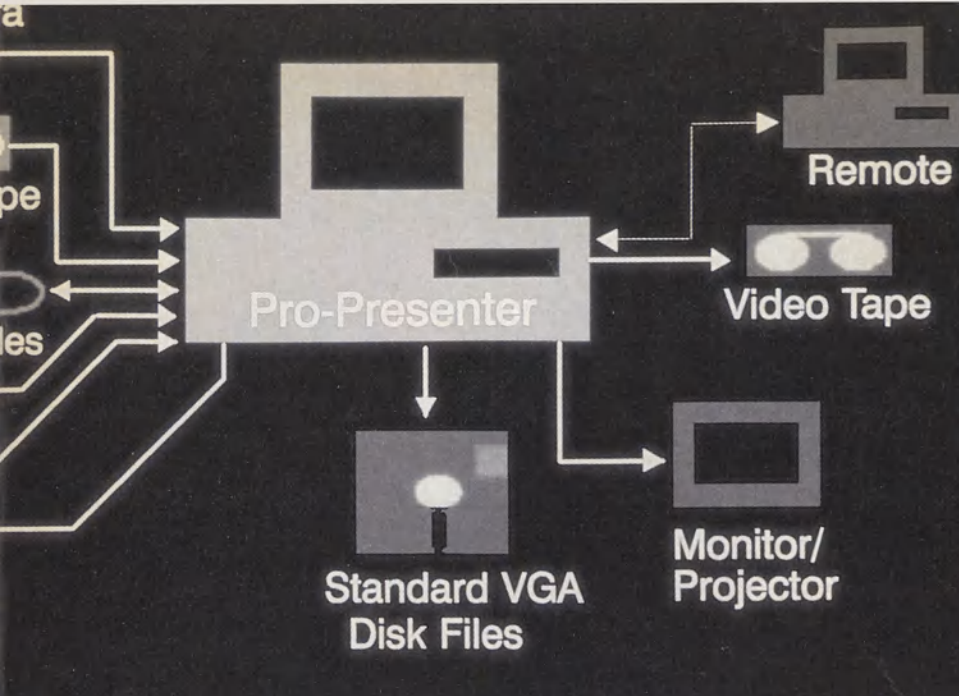
A graphical user interface has an INPUT video window to preview and mark the start and end frames of a motion sequence to be incorporated into a presentation. As

## SOFTWARE SPECS

**Operating Environment.** The initial application is being developed using Microsoft's Windows. The development tools being used will allow the product to be ported to Presentation Manager. Sequel Imaging is a beta tester of Windows 3.0.

**User Interface:** Three Major Graphical Screens. 1) *Off-line Editor:* the screen shows two video windows representing the SOURCE images and the RECORD or final presentation images. Icons under each window control the start and end points for each audio or video element. 2) *TimeLine Editor:* the screen shows three rows of 10 images. The user has options to change the duration of time that's displayed on-screen, to show only key frames or all frames, and to change the duration of any frames. 3) *Graphical Database:* this screen controls all new input to the Pro-Presenter system. Info collected as part of the input process allows for later retrieval by Boolean, keyword searches.





# Station

each sequence is added, an edit list window is updated showing time code data. A screen icon is also created to represent that element of the presentation and allow the author to cut, paste and move the element using a mouse.

An OUTPUT video window shows the author the presentation as it is currently authored. The OUTPUT window is also used to position the point at which each new source element is added to the presentation and whether the new sequence will be inserted between or recorded over existing material. The author can control variable speed, fast forward and reverse, without any jitter/distortion and can jump to a frame that's one second away as fast as a frame 10 minutes away.

In addition to editing the sequence of a presentation using a mouse and the screen icon, an author can also use a graphical time line editor or type data directly into the edit list window.

## 1. Peripheral to a Host Computer

Sequel Imaging's VideoDrive will

emulate analog laserdisc players or editing videotape decks for use with MacroMind Director and other applications. Whereas a laserdisc is a write-once device, the VideoDrive is rewritable and can also integrate audio. Additionally, presentations prepared using MacroMind Director on a Mac could be played back on DOS systems, even played back as VGA across a LAN. Basically your computer workstation can become a broadcast station: input from live video or satellite feeds, from still video, internally stored clip art, computer animation sequences—all these and anything else you can input into your workstation—can be edited and via UVC's product, output at a full 30fps to a VCR networked computers or demoed live, for example.

## 2. Digital Video Editor

Sequel's Pro-Presenter was described in AVC's December *Editor's Notes* as letting non-professionals author a presentation composed of any combination of still images, PC graphics, full-motion video and audio. Each element is

## HARDWARE SPECS

**File Transfer.** Digital data files such as Truevision TARGA .TGA, Z-Soft .PCX, Media Cybernetics .IMG and virtually any format from micro-, mini- or supercomputer may be compressed to Pro-Presenter format.

**VGA Output.** Any sequence of stills and motion may be output minimally as 320x200 by 256 color standard VGA files. Any computer with a VGA card can display these images without specialized hardware using software-only decompression.

**Telecommunications.** Optional telecom features may be added to the Pro-Presenter. Assuming an average compressed file size of 20KB for a full video frame, a Telebit 19.2Kbps at 50-percent efficiency will transmit four to five images a minutes. Using 56KB data lines 20 images a minute can be transmitted, and the available T1 card can transmit 577 full images a minute. Using digital networks up to 30 images may be transmitted in one second.

easily edited using a graphical interface. Pro-Presenter's high-resolution graphics card permits full-motion video to be played inside a window of a 1024x768 still image or background.

## 3. Video Kiosk/Interactive Kiosk

A typical use of the Pro-Presenter would be to create and update video kiosks in a shopping mall. Currently, such applications would require a laserdisc to be remastered and physically installed in each system—not a method that supports quick updates. □

*Jim McGlaughlin is Applications Development Manager at Sequel Imaging, Londonderry, NH.*

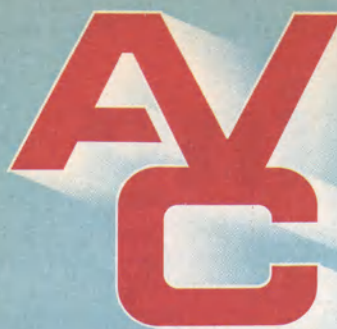
## OPTIONAL EQUIPMENT

**Pro-Presenter Remote.** A portable computer with sufficient capacity for presentation purposes, decompression-only hardware and IR control may be used to give interactive presentations at remote sites.









# AUDIO VISUAL COMMUNICATIONS

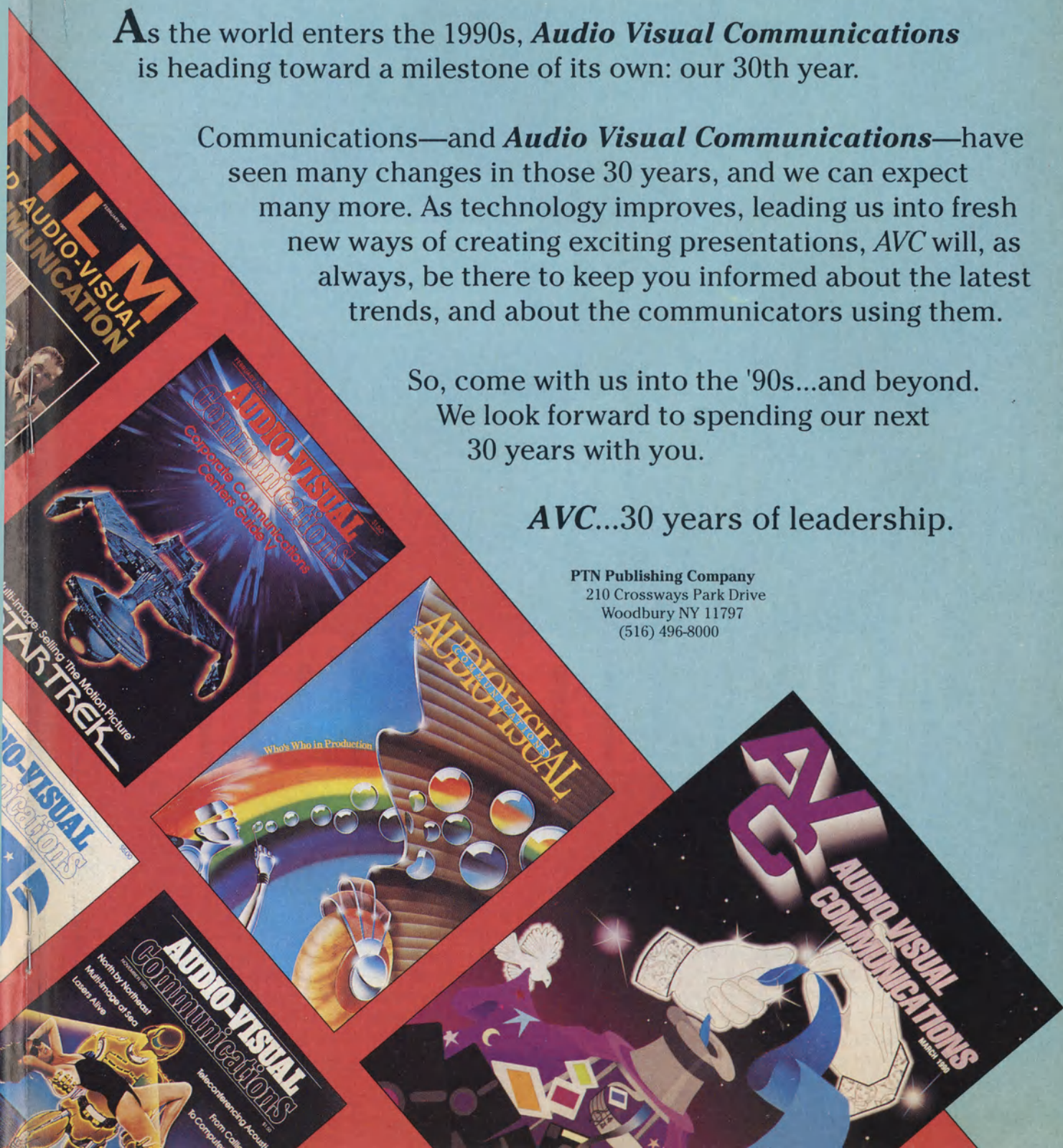
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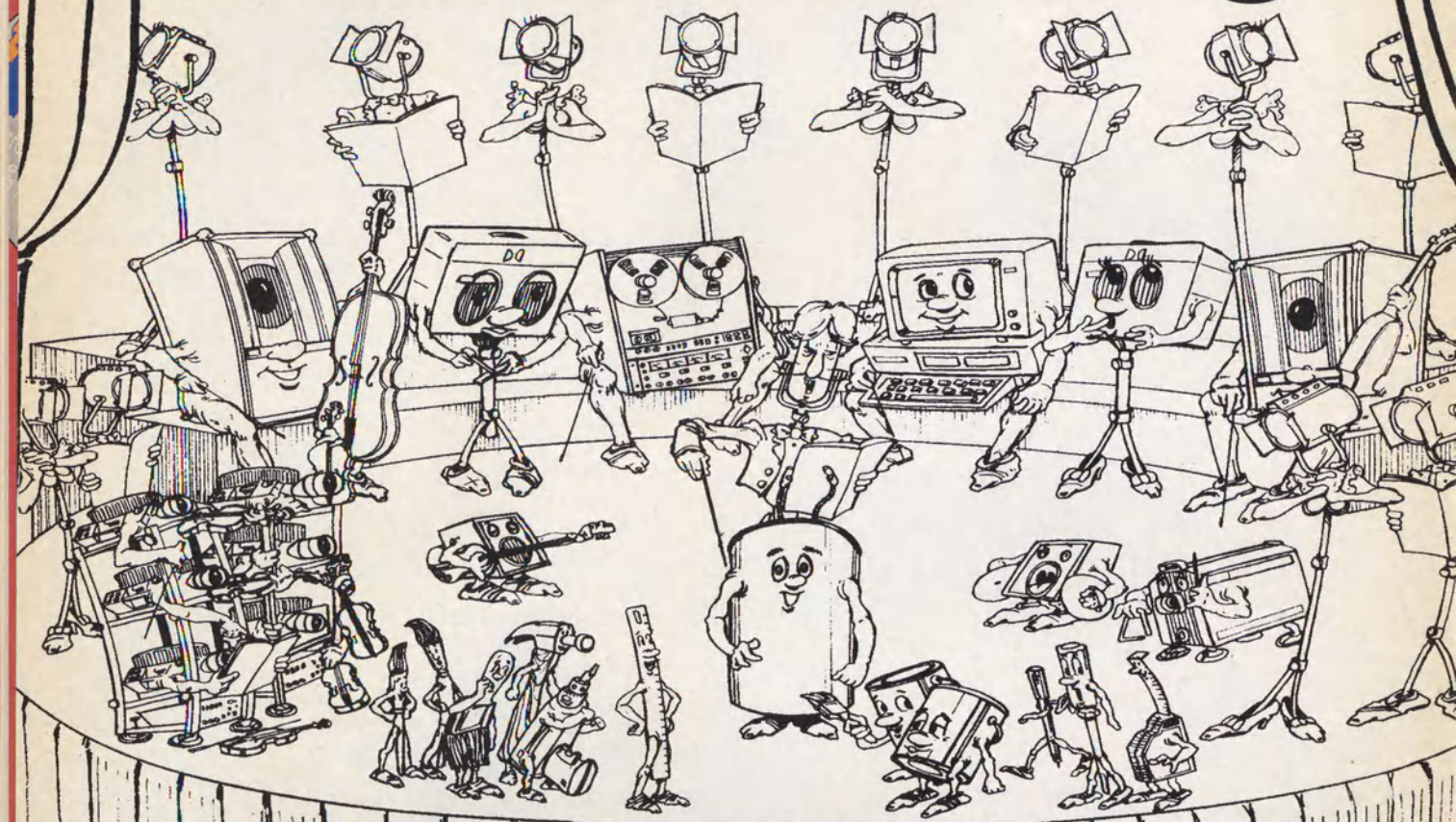
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# Understanding



# Multimedia

BY CHRIS BUTLER

I can't remember a damn thing from junior high school. Wait...that's not entirely correct. I do remember Sex Education Day, when the AV person misread the principal's illegible memo and showed us boys the *girl's* film by mistake, and vice versa. That was very exciting. And I think it permanently burned two ideas into my cranium: (1) just how powerful and lasting a visual presentation can be, and (2) the more options for control over a presentation, the better.

It's now the '90s, and the hottest thing in presentation control is running a show with a computer. Pick a buzzword: "Desktop video," "Multimedia," "Hypermedia," etc. "Hystericalmedia" seems to be more like it if one listens to the earnest sales pitches that bellow from the booths at industry trade shows. "What's that odd whistling sound you're hearing?" the salespeople rhetorically ask.



"It's the sound of life passing you by!"

Chill. The next bandwagon will be along in a few minutes, so let's pause and consider a few things before we reach for our wallets. First, automation systems are not new. Video editing systems are automated, right? Slide programmers have been around for years as well as the ability to cue slide changes from audiotape. Scripts and cue sheets are also (in a sense) "automation devices" or even more basically, an idea or point is the unifying and ordering agent in any presentation. So a computer-based system could be thought of as a logical extension of the control schemes with which AV professionals are already familiar.

Computer-based presentations are also analogous with computer-sequenced, Musical Instrument Digital Interface (MIDI) musical performances. In a MIDI system, software triggers a synthesizer to play a specific note at a specific time, as well as changing the note's waveform on the fly and/or cueing a special effect. Maybe that was a *bad* comparison, since unlike desktop publishing which is holding its own, the MIDI music market has plateaued at a level way below expectations after only a few bright years of overhyped glory.

Or maybe it was just the right kind of sobering example for gaining some perspective while evaluating this promising new technology. Let's pretend you're the creative director of an AV house, and your oldest client (who has been perfectly happy over the years with two projector slide presentations) has just asked your opinion about using computer graphics to zip up its next show. Or maybe you're already a convert, only this time you want to convince your firm's business manager to bust for a computer-based system. What concrete, non-trade show pitched, "real world" arguments can you muster to bolster your case, either for or against?

What follows are some reports from the trenches, from people who have already had extensive experience with computer-based slide systems as end users, or as

***The hottest thing in presentation control is running a show with a computer. Pick a buzzword: Desktop Video; Multimedia; Hypermedia and so on. Hystericalmedia seems to be more like it***

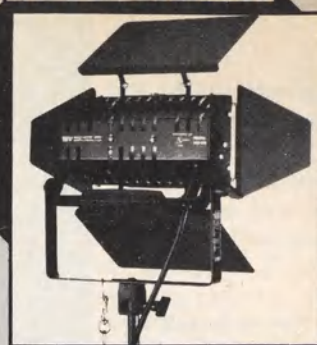
multi-image professionals wrestling with the dilemma of "Okay, it's obviously here, but is it right for my company?"

#### **EVANGELISTS OF "WOW TECHNOLOGY"**

Greenline Marketing Group, New York City, is a full-service financial communications firm whose client list bulges with Fortune 500 companies and Wall Street's most powerful brokerage houses. Its forte is packaging Initial Public Offerings and to that end president Richard O'Neill and director Dean Goldberg rely heavily on what they call "Wow Technology."

Greenline has just produced Merrill Lynch's "Issues and Issuers 1990" high-yield bond presentation in Scottsdale, AZ (*Wall Street Journal*, January 26, page C1). It was a modest affair: all they could get was Ronald Reagan as keynote speaker; about 1000 investors and company representatives to attend; and Billy Crystal and the Pointer Sisters for entertainment. Hardware and liveware requirements were "modest" too: "Two three-screen video systems with three Betacam [two and a backup] synchronized playback units," Goldberg said, "plus frame grabbers and still-frame storage gear with image magnification capabilities, live cameras for projecting the presenter's image and about a

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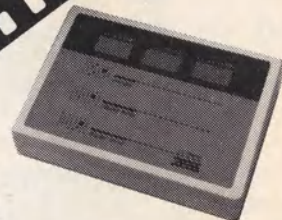
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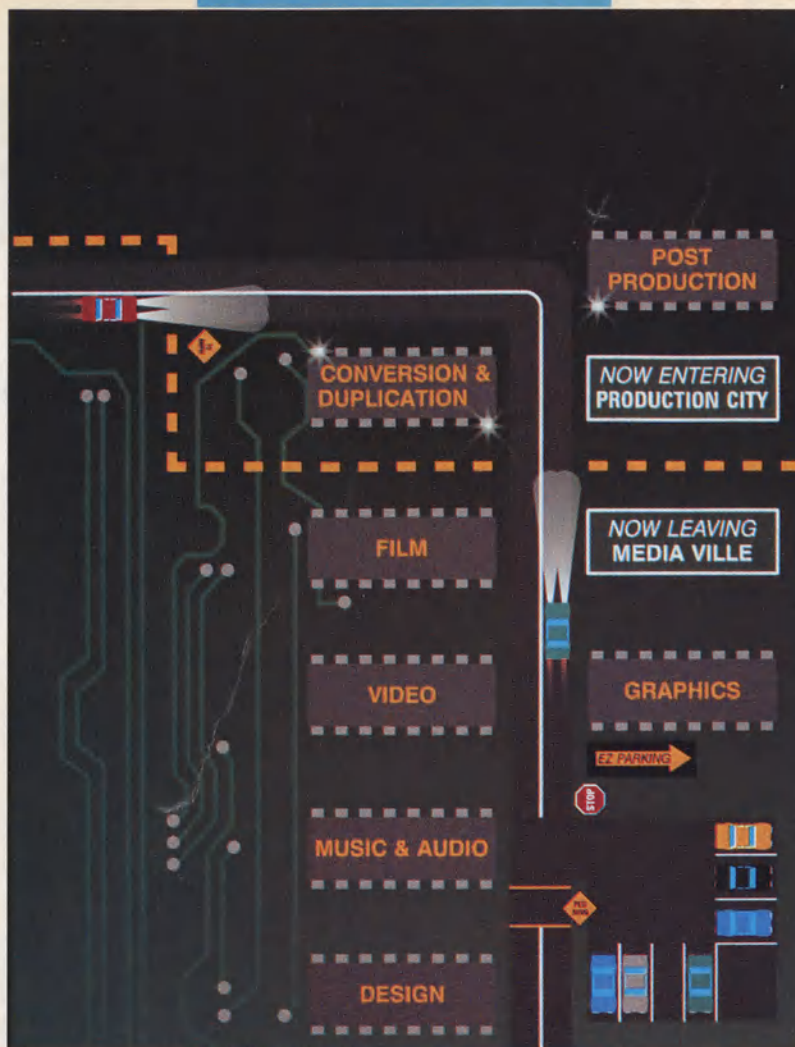


dozen technicians to run the main room. A scripted, preproduced TVL 'slide' show was also used to support the presenter's speech." TVL?

"We're working with TVL (see AVC, January, page 22), which is a PC-based, RGB monitor slide animation system," O'Neill explained. "It can animate charts and graphs, capture flat art via video camera and build up images by overlaying 50—even 100 pieces of information. Since it's electronic, the actual 'slide' is gone now. Raw data goes right into a visual form. Even a live presenter can be inserted into an on-screen window from a video camera. And TVL can cue an entire presentation from a script, in effect computerizing the button on a carousel projector."

O'Neill and Goldberg have been convinced of a computer-based system's usefulness for quite some time. It gave them another option besides the conventional scripted slide show, which people had seen for years and often seemed wooden. "TVL is to slides what moving images are to stills; that was the leap that it represented," O'Neill said. "We first used TVL in a presentation almost two years ago when it was really unknown and there was only one system in New York. We did a three-day conference that required eighteen 45-minute presentations. It took two 30MB hard drives to store all our data and a line of speakers—one after the other—to present about a ton of very sophisticated financial information. If we had gone with a straight slide show, we would have put the audience to sleep. But because of the animation capability of TVL, we could graphically explain each transaction with a moving schematic and make our presentations more lively and dynamic."

Without a computer, a show the size of the Merrill Lynch gala might have been a nightmare, but by giving them the ability to put on such a sophisticated show, didn't their equipment and personnel costs go through the roof? "No. You can't lay that on the computer or



## Greenline went with TVL on the lonely presentation highway

production house—we don't own any on-line equipment, only an off-line system for making rough cuts. But we have access to the best gear available. We produce stuff all over the country and use lots of different vendors. There are two or three freelance TVL operators who own systems, and we schedule time with them the way we'd go into a video studio for an on-line session."

Still, a computer-based system does make a presentation slicker, which means it'll probably move from being a farmed-out novelty to an in-house necessity. "Business people are savvy and sophisticated," O'Neill said. "They personally own PCs, VCRs and CD players, so they're much more familiar with the available hardware these days. In our business, you've got to be up to date, on the cutting edge, or it'll pass you by."

Among the Merrill Lynch conference's other presentation requirements were two three-screen video modules and six other videos. Goldberg served as senior producer. He described the setup:

"The basis of the video setup was a system consisting of a GVG 100 switcher, four Sony M7 cameras with programmable CCUs, two 50x1 Canon lenses, full monitoring and distribution (audio and video), and custom designed NTSC to RGB decoders and processing feed to

TVL. That's just the nature of the particular program we created in this instance," O'Neill said. "We would use this same technology for a smaller presentation too if it was practical to do so. There are certain situations where TVL may not be the best. For example, if someone's taking their presentation on a 10-city road trip, I probably would not recommend it because playback costs would exceed that of slides. But in situations where a big audience is coming to you and where you can control the room, TVL would be fantastic."

So fantastic that Greenline would consider owning one? "We go back and forth about buying a TVL," O'Neill mused. "We're not a 'finish'



**Something  
that's not  
so great  
is a com-  
puter's  
inability  
to cycle  
quickly—  
Jeff  
Poretsky**

the GE Talaria projectors. This system, designed by Video Applications for Greenline, is a compact system that enables director/TD racks, engineering racks, video control rack and tape operator rack to be broken out of special cases and set up quickly.

"In addition, three screens took independent feeds from three interlocked Betacam SP decks. Frame stores were required for each screen. The outboard screens also displayed the switched feed while the center screen used the TVL graphics system.

"The center screen was projected with overlapped GE 5055 HB Talaria video projectors. This created greater contrast and brightness for the graphics, with the added backup of a fully redundant system. The TVL outputs in RGB allowed us to send a nonencoded signal directly to the overlapped Talarias with the use of a Grass Valley 100CV switcher...The outboard screens, using the Talaria, needed to switch simultaneously. This was achieved by paralleling the controls of 12x1 vertical switchers."

Jeff Poretsky of Lightscape Productions, New York City, on the other hand, is not entirely convinced a computer-based system will be that useful to him. One can almost hear the sprockets spinning in his head as he analyzes the technology's pros and cons, soberly separating the practical from the hype.

"We're cautiously looking at combinations of gear and systems that can result in a presentation," he said. "Lightscape's primary business is TV production, so we'd expect a computer-based system to emulate what we're used to using everyday—i.e., screens, time code, editing routines and effects generation, plus sound track manipulation."

So far Macintosh-based technologies seem to offer the most flexibility in the business presentation market. "We won't have to chose between doing a slide show *or* a video. We could do either or create a hybrid using the best of the video technologies *and* a computer's paint, animation and audio systems. And if we need to, we could make changes right up to the last minute, with few of the cost drawbacks of traditional slide presentations."

Something that's not so great is a computer's inability to cycle quickly. "Slides, video and film can change in a split second, but you have to wait for a computer to get around to your next request. If you have something where timing is critical, a computer may not be fast enough, so you have to build a presentation around this fact."

Another sticking point for Jeff is poor image and projection quality since most systems output an NTSC composite image. "If your desire is to dress up a basic 'click click' slide show, a computer has something to offer. You can do little animations or vignettes although the amount of pizzazz is not that great yet."

"I keep thinking about the current buzz surrounding the D-2 digital videotape format. Everyone's saying

how wonderful it is, but it's only an 8-bit sampler. If you take a perfectly smooth, ramped image on a screen—from black to white with all the grays in between—and then put it through a D-2 system, you'll get little bands of color. It would have been better to stay in the analog domain.


"We're also on the early part of the Learning Curve. Presentations are not as easy to do this way. Prep time takes longer since nobody knows if you *can* do what you *want* to do with it yet! And can a computer render exactly what a client wants fast enough after you've committed to doing the job for them? Then there's the problem of a backup: if the computer goes down, what are

the alternatives? Will the investment of today still be valid six months from now? Is desktop equipment only the 'economy choice of the moment'?

"I think it's really hard to dazzle a salesforce with a computer presentation as the capability exists now."

For a view of computer-presented razzle-dazzle from one of the hottest names in the business, check out the multimedia dude, Marc Canter, on page 28. □

*Chris Butler is a contributing editor to AVC as well as musician, producer and composer.*



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# A Veritable Feast for the Camera Addict



BY CHRISTINE BUNISH

**T**oday producers looking to invest in video cameras are faced with an enviable roster of top of the line equipment from major manufacturers for every application and budget.

"With a broad product line, the end user can decide from a variety of models based on the cost/performance ratio: what best suits his needs at the most affordable price," said Terry Gardner, Panasonic Communications & Systems Company's marketing manager, Professional Video.

"Manufacturers have begun to recognize the importance of designing cameras that can dock to a variety of recorders, VHS, S-VHS, 8mm, Betacam and MII," added Dave Walton, marketing

manager for JVC Professional Products Company. "That flexibility means the user's investment is protected in the future."

CCD or chip cameras are now firmly entrenched in the marketplace. The initial appeal of chip cameras—low maintenance, longevity, ruggedness—and the continuing developments in chip technology, which have enhanced performance by increasing resolution and sensitivity, have made CCD cameras acceptable to even the most die-hard tube camera user.

Sony's DXC-750 and M7 models

feature Hole Accumulated Diode (HAD) sensor technology that Mel Porter, marketing manager for Professional Video Cameras, reports greatly reduces vertical smear in normal shooting situations and provides better low-light performance. The company's DXC-325 camera incorporated HAD technology in a half-inch chip for a smaller and lighter optical block. Ampex's CVC-70 camera also features HAD sensors.

BTS's FT-5 chip, a proprietary frame transfer technology that's a result of 20 years of R&D, delivers high resolution with no smear at all, according to Greg Pine, program marketing manager in Los Angeles. It's featured in the LDK-91 camera and new LDK-391 camcorder introduced at NAB.

Video camera manufacturers are targeting more and more models to the corporate/industrial user. About a year ago, Ikegami Electronics introduced its HC series that national sales manager Morgan Rees calls "an affordable dream." Sharp Professional Products has turned its direction from high-end broadcast to concentrate on the business/industrial/educational market, according to marketing manager Bruce Pollack.

Ampex's CVC-7 3-CCD camera has enjoyed success with the corporate market, noted Kevin Dauphinee, marketing manager for small-format products. The company's CVR line of camcorders operates in the Betacam format "so producers



don't have to dub across to another format," he added.

Sony's Hi8 format, introduced two years ago, has been well-received, reported Matt Soga, marketing manager for small-format VTRs. "It's designed to be a very professional, easy to use format for business/industrial customers. It offers high resolution, small size, two-hour recording capacity and time code." Soga also said Hi8's flexibility in location situations has made it popular with broadcast and cable camerapeople who've found it convenient for covering breaking news in China, Panama and Berlin.

While Ampex's Dauphinee said "the market is taking a deep breath right now—most customers feel they can relax and amortize their



things don't drift. With large-scale integrated circuitry, you can also shrink the volume and weight of the units."

#### TRY IT; YOU'LL LIKE IT

Producers who'd like to do some hands-on evaluating of the range of video cameras can take advantage of equipment rental house inventories and manufacturers' demos at new and used equipment dealers.

"People can do some tire-kicking at rental houses like ours," said rental and production manager Matt Mussari of Videosmith Rentals in Philadelphia. "We were the first to introduce new camera technology to the Philadelphia market, and customers expect us to have the latest, cutting-edge equipment. "We watched the development of CCD cameras until we felt comfortable that the technology had arrived," Mussari noted. "We've seen almost a complete reversal from tube to chip cameras in frequency of rentals. As shooters ourselves, we feel confident we've made the right equipment choices for us and our clients."

American International Meeting Makers (AIMM) operates a 24-hour, seven-day central reservation center in Minneapolis, which producers can call to reserve equipment through franchisees in over 200 cities.

## *Producers looking to invest in cameras are faced with an enviable roster of top of the line equipment, from two-chip CCDs to HDTV units*

investment," further improvements in camera technology lay ahead.

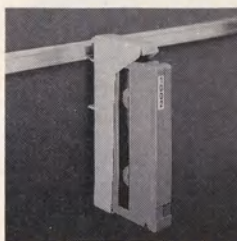
"There will be a trend toward miniaturization," said Panasonic's Gardner. "The advent of enhanced half-inch chip technology will provide virtually the same performance as 2/3-inch chips in a more compact package."

The next step, said Jerry Spencer, marketing manager for Panasonic Broadcast Systems, is digitally-processed cameras like the company's AQ product line. "When you can digitally process video, you remove 80 to 100 potentiometers for the setup," he explained. "They're handled by the camera's software, enhancing the stability of the camera over the years because the set-

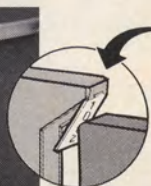
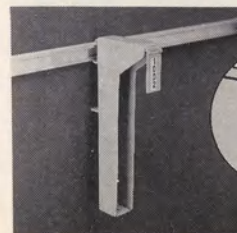
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## HDTV CAMERAS

Sony's HDC-300, introduced last year, is the company's second-generation high-definition color video camera. The 18-pound camera has three electrostatic focus/electrostatic deflection Saticon tubes for high-sensitivity, long tube life and less lag. It operates with the HDCO-300 camera control unit, consisting of two rack-mounted peripherals for fast auto setup.

BTS's KCH-1000 is the industry's only multistandard HDTV camera, adaptable to several proposed scanning modes via software. The studio and field application camera features automatic high-order registration, geometry, shading and dynamic lens correction and has an extension control bus for use with multiple cameras.

Ikegami Electronics' EC-1125 has, at the heart of its system, a newly developed 1 1/4-inch MS plumbicon pickup tube for reduced image lag. Its uniquely designed camera head is characterized



by a follow focus mechanism, an electronic viewfinder offering varied functions and image formation position marking.

The company's HL-1125 portable HDTV camera uses a 2/3-inch HARPICON tube that reduces after-image and comet tailing during low-light operation and shooting moving objects. With a housing the size of a typical ENG camera, the HL-1125 can be battery powered.

While admittedly not as revolutionary as HDTV, Ikegami's director of engineering services Phil Godfrey pointed out that the techniques of signal processing and line doubling can greatly enhance the image for large-screen projection and teleconferencing without the expense of high-definition television.

"By converting an interlace scanned signal to a progressively scanned signal with a computer processor, you can improve the picture by taking out the NTSC artifacts," he explained, "and by doubling the number of scan lines, you eliminate picture flicker." □



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Video camera rentals are popular with producers seeking back-up equipment for location shoots, those who want to evaluate units before buying and customers looking for some rather esoteric models, said AIMM executive vice president John Serio. "With 65 warehouses around the country, we probably have everything in stock somewhere."

Serio reported his company holds a warehouse sale of surplus or used equipment about every 18 months. "There is an after-market for our rental equipment for customers who are price shopping or don't necessarily need the latest models. If a camera is no longer rentable because you don't want to bounce it around anymore, you can still extend its life on a tripod."

New York City's The Camera Mart, which keeps a substantial inventory of equipment from major manufacturers for rental and sale, issues an extensive mailer of used demo and lucratively-priced new equipment.

According to marketing/advertising manager Ruth Gitto, the advantage of Camera Mart used equipment is that the equipment is actively used in rental where it's important to maintain the reputation and reliability of equipment.

Burbank's BCS sees a constant demand for its used camera equipment. "There's no piece of name-brand equipment we don't get," reported sales engineer Joel Kanter. "Our sales engineers are very well-versed with the equipment, and we try to match up the customers with the right cameras for their needs. There's so much on the market now that it's like trying to compare new cars. It takes a lot of knowledge."

## PANASONIC

Available since January from Panasonic Communications & System Company's Audio Video Systems Group, the AG-460U is a 2-CCD S-VHS hi-fi camcorder with high-quality picture virtually free from burning and after image, with hi-fi stereo sound. It features variable high-speed electronic shutter, auto focus and two-speed 10x power zoom lens.

The company's WV-D5100, introduced at INFOCOMM, is a single chip camera offering more than 480 lines of horizontal resolution, high-speed electronic shutter,

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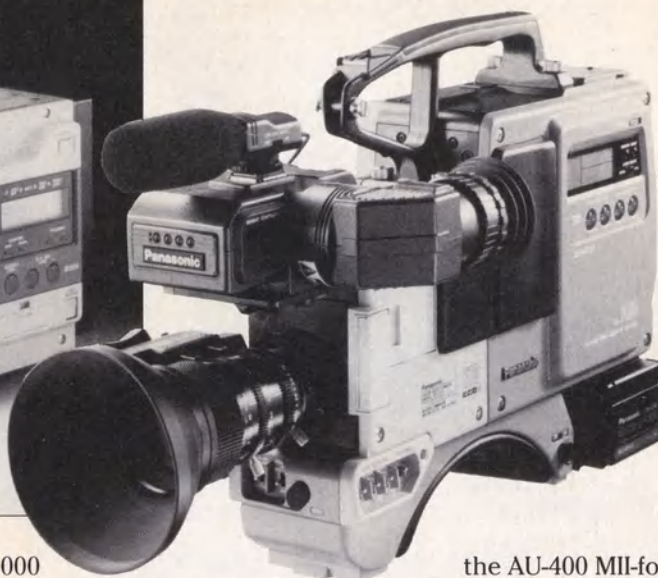
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auto focus zoom and power zoom. The S-VHS-compatible model comes in three system configurations to supplement the camera head: as a high-performance professional video acquisition system; with genlock for a multicam system; and as a complete professional-quality studio recording system.



The WV-D5000 single chip model can combine the camera head with a microscope for research or with an auto focus zoom lens and monitor for monitoring and security purposes.

Panasonic Industrial Company's WV-300CLE and WV-200CLE are 3-CCD color video cameras that can be connected to S-VHS, 3/4-inch, VHS or Betacam format VCRs. The WV-300CLE has more than 700 lines of horizontal resolution and a variable-speed electronic shutter; the WV-200CLE has more that 600 lines of resolution.

The WV-F70 2-CCD color video camera, with 500-line resolution, connects directly with Panasonic's AG-7450 S-VHS portable VCR.

Panasonic's single chip AG-180U, "VHS Reporter," features a high-speed electronic shutter, Piezo auto focus and electronic viewfinder with status indicator. Playback in B&W takes place through the viewfinder or in color on a TV set or monitor.

The NAB introduction of the AG-460 2-CCD camcorder "fills the void between the AG-450 single chip 'S-VHS Reporter' and the dockable WV-F70 2-chip camera," said Terry Gardner. The new camera, which is priced midway between the 450 and the F70, "addresses a segment of the market who want to move up from the single chip model but were overlooked by the higher-priced F70," Gardner explained.

Panasonic Broadcast Systems offers the AK-400 and AK-450 3-CCD color video cameras that dock to

the AU-400 MII-format VCR. The AK-400 features 650-line resolution, the AK-450 800-line resolution via high-pixel density RGB CCD image chips.

With the NAB introduction of the portable AQ-11, Panasonic Broadcast now has three digital processing cameras that use digital signal processing for stable picture quality, allowing centralized control, setting memorization and maintenance-free operation. The AQ-10 features more than 630 lines of horizontal resolution and the AQ-20 750-line resolution; they can dock with the AU-400 MII VCR and a wide variety of MII, S-VHS and other VTRs and have an optional adapter for digital interface to digital VTRs, switchers and other devices.

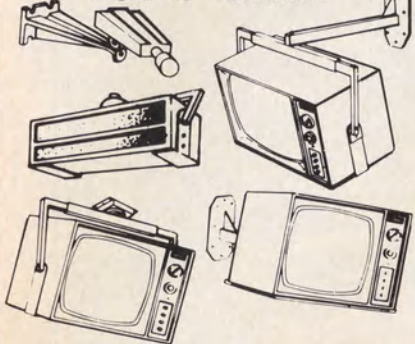
## AMPEX

Ampex introduced its CVR-400 Beta SP camcorder featuring three-frame interline transfer chips at NAB. The CVR-300 model, a favorite of broadcasters, has three interline transfer CCDs for 670 lines of horizontal resolution, selectable-speed electronic shutter and viewfinder display.

The CVC-7 3-CCD camera has 700-line resolution and docks to Ampex's CVR-5 Beta SP recorder. The CVC-70, which Ampex is just beginning to ship, uses HAD sensor technology and frame interline transfer chip structure for shooting in low-light conditions. It also docks to the CVR-5 Beta SP recorder.

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## HITACHI

Hitachi Denshi America's Z-ONE CCD Dockable Color Camera has 2/3-inch chips that achieve 750 lines of horizontal resolution and a S/N ratio of 60dB. This latest release camera features real-time auto white balancing, for continuous adjusting as lighting changes. Six memory auto white provides dual memory for each optical filter. Shutter speeds include 1/100, 1/200, 1/500, 1/1000 and 1/2000 of a second. Hitachi also has an SK line of cameras, which were featured at NAB.

## IKEGAMI

Ikegami Electronics has positioned its HC series of cameras for the corporate/industrial market and has pursued an aggressive campaign to sign corporate dealers. According to Morgan Rees, the company is offering a "very attractive" HC-200/230 promotion to dealers by which purchasers receive several free camera accessories (Anton-Bauer battery, charger and bracket and Canon 12x lens) as well as a certificate for \$575 in Anton-Bauer products. "It's how to buy 10 pounds of product with a 5-pound budget," Rees said.

Ikegami's HC series uses half-inch CCDs for compact, lightweight cameras. The HC-200 has 530-line resolution and can be operated in conjunction with an S-VHS portable VCR directly or integrated to a Betacam VCR with an adapter. The HC-230 has 600-line resolution and high-power zoom lens and the HC-240 has 650-line resolution and can be remotely operated by modem for teleconferencing. Both models can be combined with Betacam and component-type VCRs.

## BTS

BTS's new LDK-391 camcorder is "the first product extension of the Betacam line by a manufacturer

other than Sony," said Greg Pine. The 14-pound Beta SP camcorder features the company's FT-5 sensor, uses 30-minute tape loads, has low power consumption and displays over 700 lines of horizontal resolution. "It's great for corporate shooting when you need to get in and out of locations fast with no cables," Pine pointed out.

The company's LDK-90 and LDK-91 3-CCD cameras can be configured with onboard Beta SP or MII recorders or supplied with multi-core cable or triax. The LDK-90 has 650-line resolution, and while competitively priced for the corporate/ industrial market, has been used to shoot shows on network TV. The LDK-91, incorporating the

FT-5 sensor, has over 700-line horizontal resolution.

## JVC

From JVC Professional Products Co., the KY-17U color video camera is designed for direct docking to JVC's BR-S410U S-VHS recorder, and with an adapter, to Betacam and MII decks. It combines technology for precise alignment and bonding of the three chips with spatial offset technology and high-density pixel CCD elements, so smear above the subject is almost eliminated, lag is extremely low and burn is minimized. The half-inch CCDs display a resolution of 640 lines.

The KY-25U 3-CCD camera uses 2/3-inch chips for 700-line resolution. It also docks directly to the BR-S410U recorder or to Betacam and MII decks with an adapter.

JVC's BY-10U is a single-chip camera with 450-line horizontal resolution. It takes on a camcorder configuration in the same way as the KY-17U and KY-25U, and with accessories, can be used in studio applications, video microscopy and image processing.

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## SHARP

Sharp Professional Products' half-inch chip VHS camcorders are very easy to use, according to Bruce Pollack. They feature full auto systems, audio and video fade-in/fade-out and interval recording for motion analysis applications.

The VL-L150U has a 6x power zoom lens, the VL-L270U a 12x power zoom lens and the VL-L280U a 12x power zoom lens with cat's eye feature for use in extremely low light conditions and a digital supering function for titles and graphics.

## SONY

Sony Professional Video's EVO-9100 single chip Hi8 camcorder is billed as a portable high-quality acquisition system for the U-Matic SP product line. It has time code and improved specs of the popular 8mm format in a professional, compact, easy to use package delivering 400-line resolution.

The DXC-325 multipurpose image-acquisition device can be used with adapters for computer

graphics, teleconference and scientific applications. It can be docked to the new Hi8 EVV-9000 recorder and features HAD sensor technology for superior picture quality and color.

The DXC-3000A camera can also be configured for several



uses and has a VTR selector switch for 1-inch, 3/4 and 1/2-inch consumer VTRs. The 3-CCD camera has 560 lines of horizontal resolution and an Intelligent Software Servo System for automatic functions.

Sony's DXC-M7 features the higher density 768 interline transfer 3-CCD chip array for 768-line resolution and little vertical smear. Its Dynamic Contrast Control (DCC) circuitry provides detailed highlights in extreme lighting condi-

## Panasonic's WV-300CLE has more than 700 lines of horizontal resolution and a variable-speed electronic shutter

tions. The unit can be interfaced to 1-inch, 3/4, Betacam, VHS and S-VHS recorders by setting a select switch inside the camera.

The miniature 3-chip DXC-750 is a specialty camera with variable speed electronic shutter from 1/125th to 1/10,000th of a second; it's effective for motion analysis and observation in manufacturing, process control applications and demanding scientific and research applications. It uses HAD sensor technology for 700-line resolution.

Sony Broadcast Products Division's BVW-200 Betacam SP camcorder has been successfully marketed to the corporate/industrial user. The 3-CCD camera delivers 550-line resolution, high sensitivity, minimal lag, high resistance to image burn and quick startup. □

*Christine Bunish is a contributing editor to AVC as well as several other communications publications.*

### AMPEX

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### BTS

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### HITACHI

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### IKEGAMI

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### JVC

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### PANASONIC

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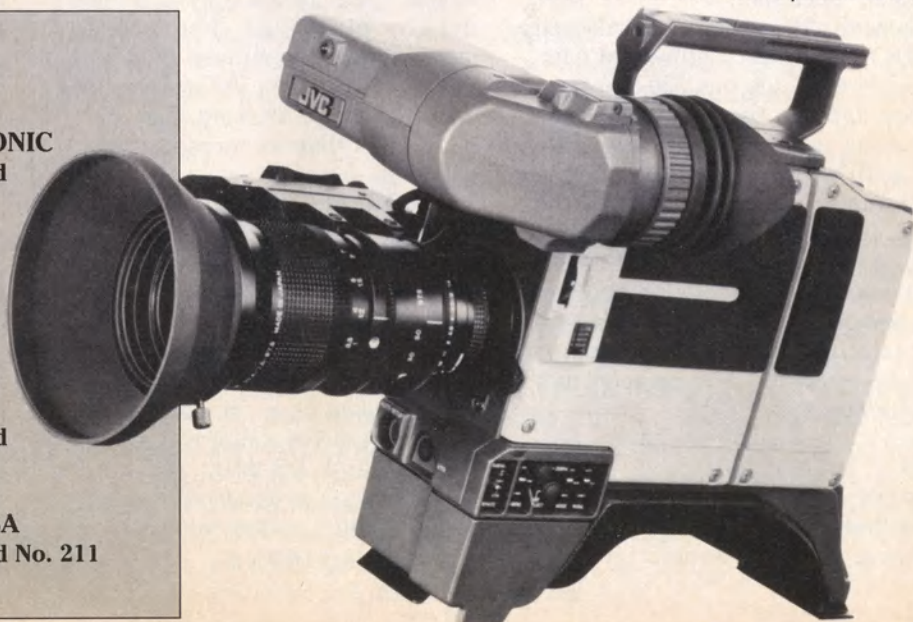
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usually only ask you return them if you find them unsuitable for the type of work you do. I always appreciate a demo reel that's organized into categories: straight narration; hard sell; soft sell; characters. The local AFTRA/SAG office can also help you contact professional narrators (see sidebar).

If you feel you aren't hearing what you like on the demo tapes, a casting session might be in order. It should take less than a half hour per person, and most narrators are glad to do auditions without a fee. Rent studio time and use excerpts from your script so that you can

cannot hire non-union talent.

If you think it's confusing so far, you're right. And that's only the tip of the iceberg. Before becoming a signatory or hiring union talent, be sure you understand all the rules and regulations of the contract. For more information contact:

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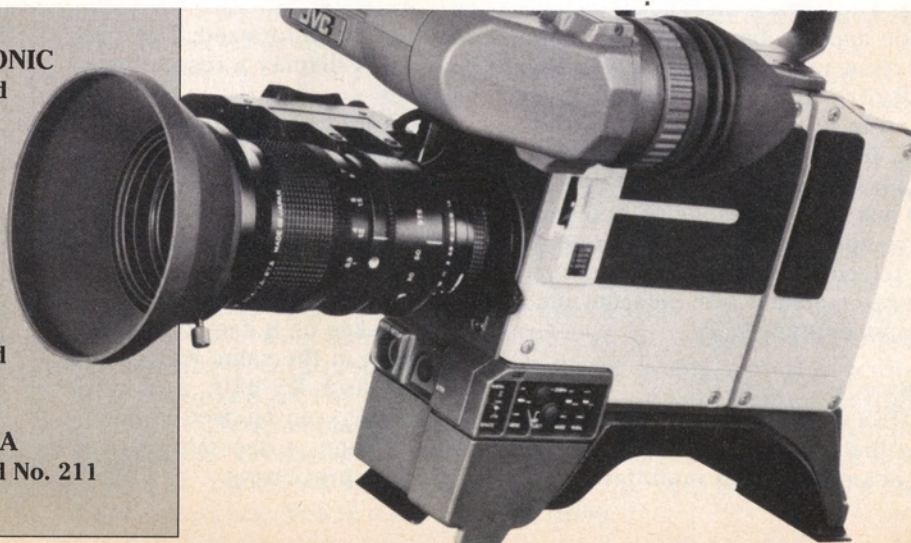
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DO YOU READ ME?

# PRODUCING AN EFFECTIVE VOICE-OVER

BY KEN FRENCH

**W**here would we be without the voice-over? Producing a lot of "image" programs, that's where. For conveying information with a personal touch, nothing works quite like a well-written, well-read narration.

## GO FISH

The first and most important step in the telling of your story is casting the right talent. An effective narrator conveys the *attitude* behind the information. He or she must be versatile enough to infuse the appropriate personality into your words, yet still be sincere and accurate.

Unlike our little underwater friends, narrators are generally quite easy to hook. You or your production house should keep files and demo tapes of the best narrators in your area. They will be glad to send you these materials and usually only ask you return them if you find them unsuitable for the type of work you do. I always appreciate a demo reel that's organized into categories: straight narration; hard sell; soft sell; characters. The local AFTRA/SAG office can also help you contact professional narrators (see sidebar).

If you feel you aren't hearing what you like on the demo tapes, a casting session might be in order. It should take less than a half hour per person, and most narrators are glad to do auditions without a fee. Rent studio time and use excerpts from your script so that you can

## Understanding AFTRA

The American Federation of Television and Radio Artists (AFTRA) and the Screen Actors Guild (SAG) have collaborated to become one of the most powerful trade unions in the communications industry. The union negotiates the rate scale at which these actors will work. The bulk of voice-over work for corporate AV productions falls under Category I: "Industrial/Educational" or Category III: "Slide/Tape." The chart shows the costs for these sessions.

Principle narrator, first hour	\$261	Non-principle	
Additional half hours	76	(max. 15 lines, 2 parts)	
Revisions	142	first hour	128
(max. half hour, within 30 days)		Additional half hours	51

An additional 11.5 percent must be paid by the producer into a pension and welfare fund. Point of purchase, products for resale and commercials are all more expensive, as is on-camera talent.

While good, non-union talent may be available in your area, be aware that the union forbids mixing non-union and union talent in the same production. This can provide serious problems for corporate video producers who need inexpensive extras or walk-ons but would like a union narrator.

Only an AFTRA/SAG signatory can hire union talent. Often times the facility that does the recording will be a signatory. If not, I highly recommend using a "paymaster" - an agency that will pay the union, then bill you directly. A paymaster typically adds a 7 to 10 percent markup but can be very helpful in explaining and calculating rates for projects.

If you intend to use union talent on a regular basis, you may want to become a signatory. That means that you can hire and pay union talent directly, but you *cannot* hire non-union talent.

If you think it's confusing so far, you're right. And that's only the tip of the iceberg. Before becoming a signatory or hiring union talent, be sure you understand all the rules and regulations of the contract. For more information contact:

**AFTRA National Office**

260 Madison Avenue, New York, NY 10016  
(212) 532-0800

AVC would like to point out that non-union talent may be as good or better for your needs if your needs fall into one or several of these categories:

1. You're working with a small budget and your productions that require VO talent are few and far between.
2. You're under tight deadlines and again such projects requiring VO talent are few and far between.
3. You have a pool of reliable people with speaking voices suitable to your needs who are non-union and have not and do not need union talent.
4. Your budget is such that you cannot afford high-priced legal help to negotiate on your behalf.



hear the sound of the voice as it will actually be recorded; get a feel for how the talent will respond to direction in the real session.

Speaking of the script, it's important to get *final approval*, from as high as you can reach, *before* the day of the voice-over session.

There's nothing sillier than keeping a sound studio and narrator on the clock while you try to get in touch with the legal department to see if it's cool to abbreviate the "International Air Transport Association," for example, as "IATA" (I ate a...?). Check abbreviations, acronyms,

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calculations and especially pronunciations (Why, I oughta...).

The script should be printed by a laser or LQ printer in a large, easy to read font. The pages should be numbered, and the margins should be wide allowing space for corrections and comments to be written in.

If your script includes on-camera or other dialogue, or numerous markings for sound effects and music in the right-hand column, strip them out leaving only the voice-over copy. Make enough copies for everyone at the session, including the engineer, then take a moment to clarify any potentially difficult areas to everyone.

Before you attempt to get that dramatic opening on tape, make sure the narrator has something to write with and drink. Ask someone to take phone calls or turn on the answering machine. Finally, make sure everyone is comfortable and that you can hear the talent and



Ask business peers if they have suitable VO talent working for them. Or maybe adding the personal touch, recording VO yourself, is the answer.

they can hear you; nobody should need to shout.

#### WHO'S THE BOSS

A voice-over session needs a producer. During the session it's the producer's job to create the best possible realization of the script by directing the talent and the engineer.

When directing, be direct. Offer specific suggestions concerning the pacing and delivery, the attitude and implications of the words being read. Make clear what the intentions and the audience are for the program. If you are the producer, you must solicit opinions but avoid asking others to make judgement calls without the proper criteria. Never ask for "another take just like the last one."

The producer controls the flow of the session. If there's tension in the air, clear it up or ask for a five-minute break. On the other hand, if the attitude is too relaxed, don't be afraid to ask for a more concerted effort.

As you proceed through the script, it's generally best to stop the narrator immediately when you hear a problem. Explain the situation while it's fresh in everyone's mind, then start again from the beginning of the current paragraph. This technique also avoids having to reread the subsequent material and makes editing much easier.

#### WHO'S THE NERD?

The engineer's duties begin with setting up the room and getting the talent situated properly at the mic. He or she should discuss with the

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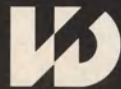


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producer the vocal "tone" desired and adjust the mic accordingly: closeup for a more authoritative, aggressive sound; backed off for a more conversational, pleasant sound.

During a practice read-through, the engineer will adjust the recording level and tone and then using all his will power, leave it alone. That's right, it's crucial to maintain a consistent level so that any part of the script that's reread later in the session (called a "pickup") will match. Besides, there are other things to do.

Because the engineer will be responsible for assembling the selected takes to match the script, he or she should be in charge of assigning take numbers. Each time the talent begins after an interruption, the engineer should record an audible "slate" number to tape and mark the script accordingly. A very low frequency tone is usually recorded along with this slate and later during editing, when the tape is winding at high speeds across the playback head, the tone will sound as a medium pitched "beep," making it easy to count takes.

If asked, the engineer can usually get timings for given parts of the script. Also the engineer should be listening carefully for any unwanted noises like paper or clothes rustling, stomach grumbling, etc. In essence the goal here is to leave the producer free to concentrate on the delivery of the script itself.

### BEAM ME ABOARD

If you decide to use talent from another city or you can't physically attend the recording session, here are two ways to get the job done.

In the "phone patch" session, the talent and engineer are in a distant studio, while the producer directs the session over the telephone. The recording is done at the distant studio and the tape is shipped to the producer (be sure to get all the takes). While some studios have wiring that inserts the audio directly into the phone lines, I have found that using a speakerphone in the studio (like a conference call) works just fine.

Another more elaborate, (translation: expensive) method is the "satellite patch." This requires using two studios that belong to a global network available in most major cities. Again the talent and engineer are in the distant studio, while the producer and a second engineer work in the local studio. The voice is transmitted over a high-fidelity satellite link to the local studio and recorded there. In this type of session the producer can hear the finished product while directing the talent. The cost is greater because you are paying for two studios and an additional surcharge for the satellite hookup.

Wherever and whoever you record, let the voice-over breathe life into those slides or B-roll footage and put some personality into the information. Next month we'll look at signal processing devices, with personalities of their own, that will add some extra sparkle to your soundtrack. □

*Ken French, a contributing editor to AVC, is a composer, performer, recording engineer and producer from Boston, MA, and regular contributor to the Aircraft Music Library.*



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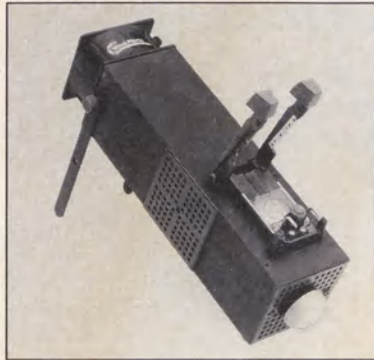


## Industry Watch... Hardware

### High-Intensity Viewing Lamp

A twin-blade film trimmer, fan-cooled halogen lamp with dimmer control, and a Variable Registration (VR) punch for registering images are features of the TR 2160 VR Brightbox. It can sit flat on a copystand and fold its legs towards the viewer. The VR punch is equipped with adjustable stops to move film .020 inches (0.5mm) parallel to the 35mm format's short dimension. The VR Brightbox costs \$295.

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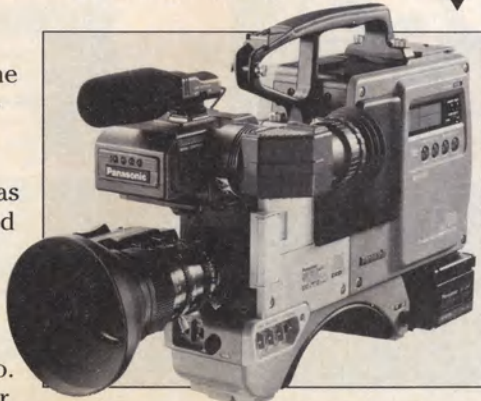
### Projection Wall Covering

ST-777 is a vinyl-backed, laser-cut, commercial wall covering with a projection surface measured at 1.5 f-stops brighter than a matte-white screen. It is sold by the linear yard, is washable and features a surface with no off-axis loss of brightness. Samples available.

**SOUND-TECH INC.**  
Circle Info Card No.213

### Video Cameras

Panasonic's latest video camera releases includes the WV-F70D 2-CCD camera that docks directly to Panasonic's AG-7450 S-VHS Potable Video Cassette recorder. Two CCDs each with more than 335,500 pixels, are connected to a high-def FL4 prism, providing 500 lines of horizontal resolution. The S/N ratio is 56dB (-6dB gain). The 300CLE three CCD camera, compatible with S-VHS, offers more than 700 lines of horizontal resolution and a greater than 60dB S/N ratio. Variable shutter settings are 1/60, 1/250, 1/500 and 1/1000. It incorporates a three-position auto-white circuit, auto-black with pulse cancel and SMPTE color bars. The WV-200CLE 3-CCD camera, compatible with S-VHS, has been upgraded to yield 650 lines of horizontal resolution and a 59dB S/N ratio. It works under 2.5 FL. It comes with a 1.5-inch viewfinder, Canon 12x lens, mic, tripod mounting adapter and case. The WV-D5100 Video Camera System, compatible with S-VHS, offers 480 lines of resolution. Three system configurations are offered to supplement the WV-D5100 camera head include: WV-S051 for professional video; WV-S061

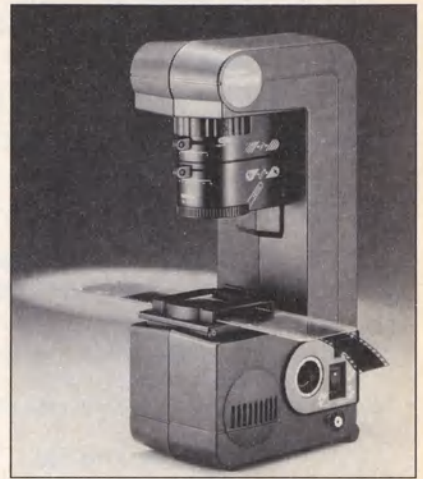


with Genlock; WV-S071 turnkey studio system.  
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Circle Info Card No.214

### Film/Video Processor

The lightweight, compact Fotovix III converts 35mm negative film or slides to an image that can be viewed on a TV screen. Any part of a picture can be enlarged three times using the zooming function of a standard 3X zoom lens. A film carrier guide rotates for either horizontal or vertical picture viewing, and the color balance is optimized by using the joy stick control. Fotovix III can be attached to a VCR, still video recorder, video printer, optical disc recorder or a computer via an image grabber to record images. List price is \$999.

**TAMRON INDUSTRIES INC.**  
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### CD-I Platform

Starter System, designed to create multimedia presentations using the Philips CD-I player, also consists of a multimedia controller, extension system, 40MB hard-disc drive, monitor and keyboard. A sample CD-I disc containing hundreds of images and sound samples is included. The OptImage CD-I Emulator enhancement system is also available to convert the Starter System into a full CD-I publishing system. With this, a CD-I master-ready program can be built and "played" on the CD-I player while the program is contained in magnetic memory.

**OPTIMAGE INTERACTIVE SERVICES CO.**  
Circle Info Card No.216

### Medium Format Storage System

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6x6 and 6x7 cm transparencies or negatives which then fit neatly into the pockets in the page. When images are handled and removed, the TransView sleeve provides protection.

**LIGHT IMPRESSIONS CORP.**  
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#### Microcontroller

87C51FC is a high-performance CHMOS 8-bit microcontroller incorporating 32KB of ROM/EPROM, 256-byte RAM, a PCA with HSIO, compare/capture, PWM capability and watchdog timer, three 16-bit timer/counters, a two-level program memory-locking scheme, TTL- and CMOS-compatible logic levels, 64KB of external program memory space, a programmable serial channel with framing error detection and automatic address recognition, and 32 pro-



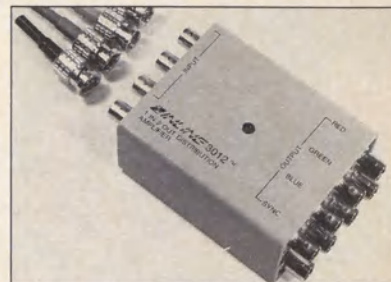
grammable I/O lines. The 12MHz 87C51FC's are \$67 each in quantities of 1000, and the 16MHz are \$73 each. The emulator specific to the 87C51FC is the ICE-51FX/PC for \$3750.

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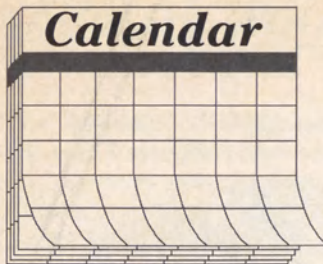
AVCOM SYSTEMS INC.

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## Calendar



### APRIL

**11-13:** MacWorld Expo, San Francisco, CA; (617) 329-7466.

**11-14:** Visiting Soviet Union artists on staging and theater at the MECCA in Milwaukee, WI; Dr. Joel E. Rubin, US Center OIS-TAT, 119 W. 57th St., Suite 911, New York, NY 10019; (212) 757-5646.

**16-19:** SUPERCOM on communications technology in Atlanta, GA; (312) 372-5060.

**16-20:** Society of Photo-Optical Instruments Engineers in Orlando, FL, at

the Orange County Convention Center; Hope Reports, (716) 458-4250.

**17-21:** National Sound & Communications Association on sound and AV technology in Las Vegas, NV; (312) 598-7070.

**19-20:** Industrial Training Corp. seminars on interactive "Activ" videodiscs; Eric Shotwell, (800) 638-3757; (703) 471-1414.

**22:** Photographic Society of America presents a full day of instructive photography; Joseph J. Zaia, 275 Mayberry Ave., Staten Island, NY 10308; (718) 356-8968.

**22-24:** National Relay Conference on computer products and data communications in Stillwater, OK; (219) 264-9421.

**23-25:** University of the

Arts' seminars and exhibits on applied video technology; Kirby Smith, Broad & Pine Sts., Philadelphia, PA 19102; (215) 875-4800.

**24-26:** Electronics Distribution Show in Las Vegas; (312) 648-2300.

**27:** Deadline for Association for Multi-Image competition; Charles E. Morrison, 8019 N. Himes Ave., Suite 401, Tampa, FL 33614; (813) 932-1692.

**27-May 10:** DRUPA '90, international trade show on printing and the graphic arts in Dusseldorf, West Germany; Lisa Martin, Dusseldorf Trade Shows, The Empire State Building, Suite 4621, New York, NY 10118; (212) 239-3173.

### MAY

**8-10:** Computer Graphics

Show in Chicago; (301) 587-4545.

**8-10:** Federal Computer Conference and computer graphics at the Disneyland Hotel and Convention Complex in Anaheim, CA; (800) 343-6944.

**8-10:** ShowTech Berlin/International Trade Fair & Congress for Entertainment Technology, Stage Engineering, Equipment & Organization; Berlin, West Germany; (030) 3038-0.

**9-11:** Digital Multimedia, Monterey, CA; (617) 893-9130.

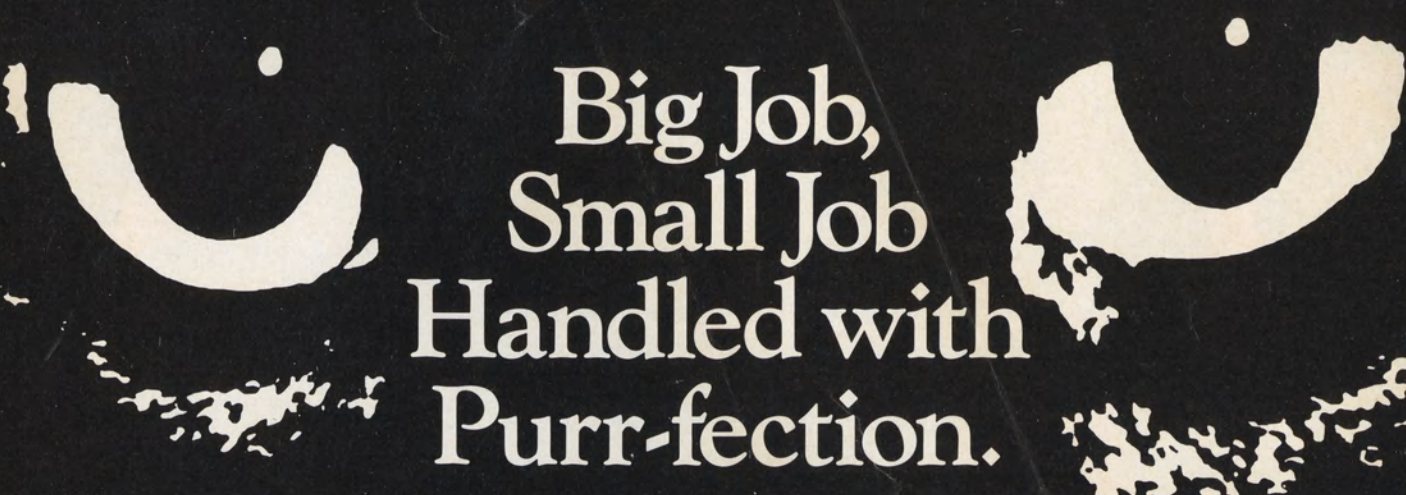
**15-18:** Computer Graphics Aided Multimedia & Presentations (CAMMP) at the Los Angeles Convention Center; Debbie Rotolo, (800) 248-5474; (914) 328-9157 in NY. □

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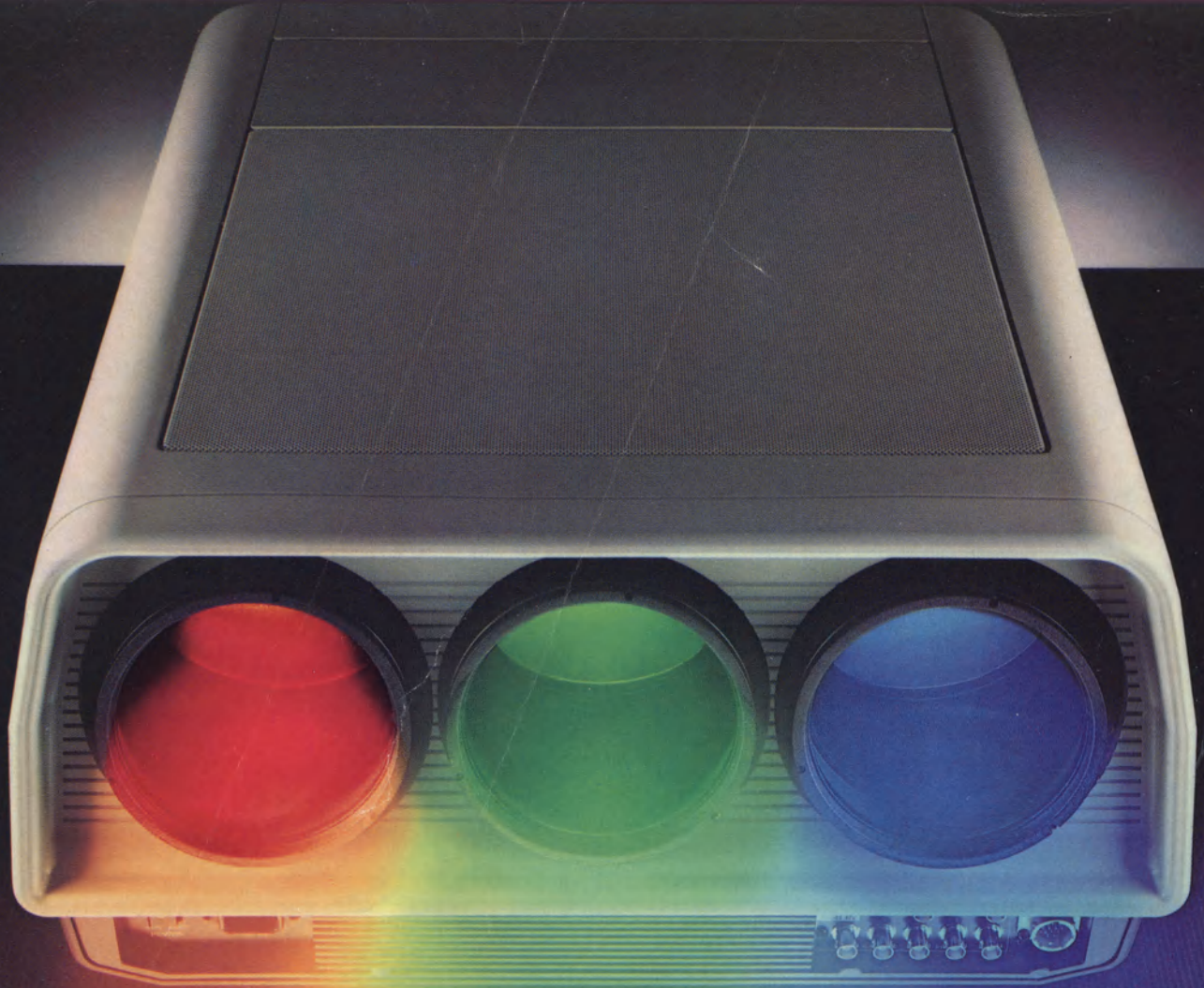
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